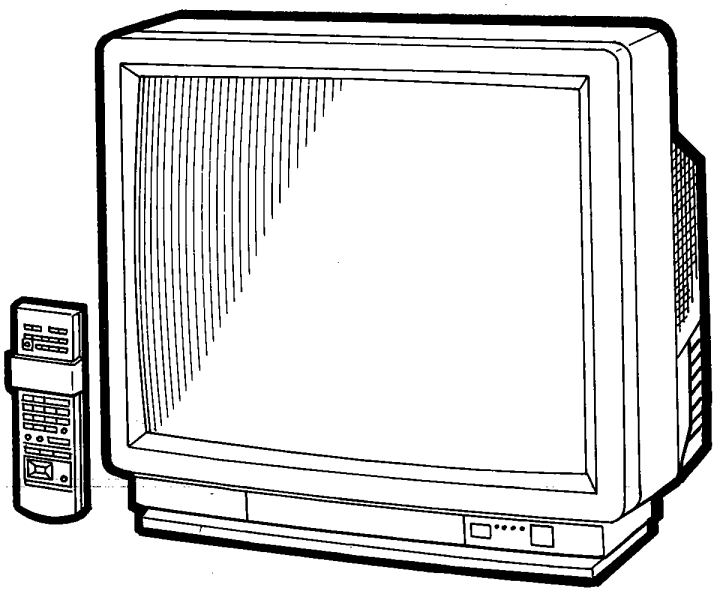
JVC

INSTRUCTIONS

AV-21F1EG/AV-25F1EG/AV-28F1EG

COLOUR TELEVISIONS

MANUEL D'INSTRUCTIONS: TELEVISEURS COULEUR
GEBRUIKSAANWIJZING: KLEURENTELEVISIE
MANUAL DE INSTRUÇÕES: TELEVISOR A CORES



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WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:
TO ENSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

- Operate only from the power source specified (AC220~240V, 50 Hz) on the unit.
- Avoid damaging the AC plug and power cord.
- Avoid improper installation and never position the unit where good ventilation is unattainable.
- Do not allow objects or liquid into the cabinet openings.
- In the event of a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.
- When you do not use this TV set for a long period of time, be sure to disconnect the power plug from the AC outlet.

Thank you for purchasing a JVC colour TV set. To ensure your complete understanding, please read all instructions in this booklet before operation.

The illustrations in this booklet show the AV-25F1EG.

THE FOLLOWING FUNCTIONS CAN BE PERFORMED

For detailed operation of each function, refer to the page in parenthesis.

- Real Channel (CH mode and CC mode) or Programme Channel (PR mode) can be selected.
  (→ Page 10 and 11)
- Cable TV can be viewed.
  (→ Page 10 and 11)
- Teletext programmes and regular TV programmes can be viewed.
  (→ Page 10 and 36)
- Programme Channels can be preset in up to 100 Channel Positions. Channels that are not preset can be programmed to be skipped.
  (→ Page 11, 25, 26 and 27)
- PAL (B,G) or SECAM (B,G) can be received.
  (→ Page 12)
- Sound multiplex broadcast can be received.
  (→ Page 13)
- Picture and sound tone adjustments can be made.
  (→ Page 16)
- With the Acoustic Surround Processor (ASP) feature, surround sound effects can be obtained.
  (→ Page 17)
- 5 different sound tones can be easily selected. (Tone select (♪))
  (→ Page 18)
- With the VNR (Video Noise Reduction) feature, a picture which appears noisy can be softened.
  (→ Page 19)
- The aspect ratio of the screen can be switched. (between 4:3 and 16:9)
  (→ Page 19)
- With the Menu Control feature, settings can be made in an "interactive" manner with the TV.
  (→ page 19)
- Station ID can be displayed below Programme Channels.
  (→ Page 20)
- When TV broadcast reception finishes for the day and no signal is received for a certain time, TV power can be switched off automatically.
  (→ Page 21)
- For each input mode (TV, EXT 1, EXT 2 and EXT 3) , picture adjustments can be stored for easy recall.
  (→ Page 22)
- Specified channels can be "guarded" (locked) so that they cannot be tuned to unless ID numbers are correctly entered.
  (→ Page 23)
- The current time can be displayed on the screen (in the 24-hour system).
  (→ Page 29 and 35)
- With the Timer function, TV power can be automatically switched on at a preset time.
  (→ Page 30)
- TV power can be automatically switched on and off twice every day at preset times.
  (→ Page 32)
- A JVC Video Cassette Recorder can be operated using the Remote Control.
  (→ Page 36)
- A variety of external components can be connected to the TV.
  (→ Page 42)

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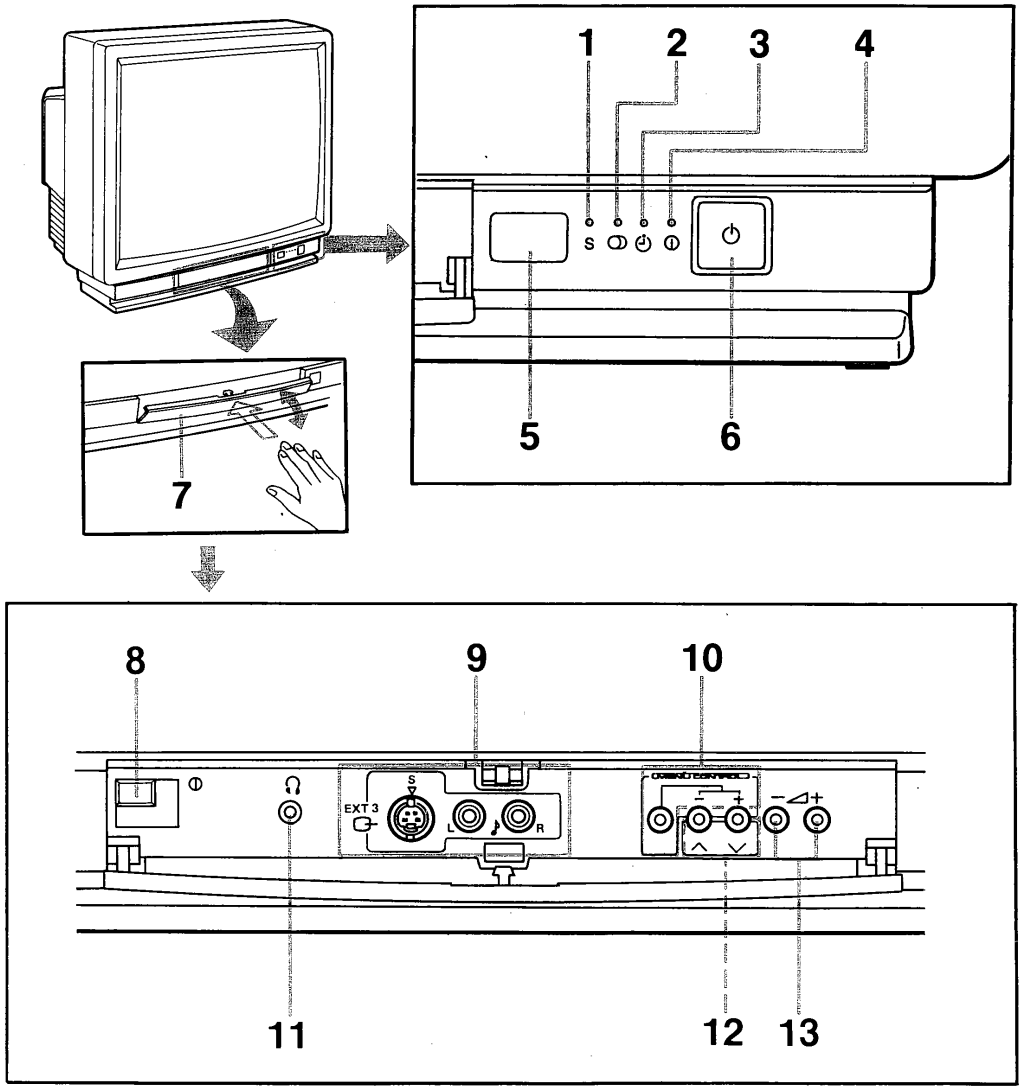
CONTROLS AND THEIR LOCATIONS

■ Front Panel



1. S-input select indicator (yellow)
2. Sound multiplex indicator (green)
3. Timer indicator (orange)
4. Power indicator (red)
5. Remote Control sensor
6. Power button (⏻)
7. Front panel door
8. Main power button (⏼)
9. EXT 3 connectors (⊐)
   (directly-connected to rear EXT 3)
10. "MENU CONTROL" operating section (front panel)
11. Headphone jack (∩)
12. Channel access buttons (∧ / ∨)
13. Volume buttons (◿)

■ Remote Control

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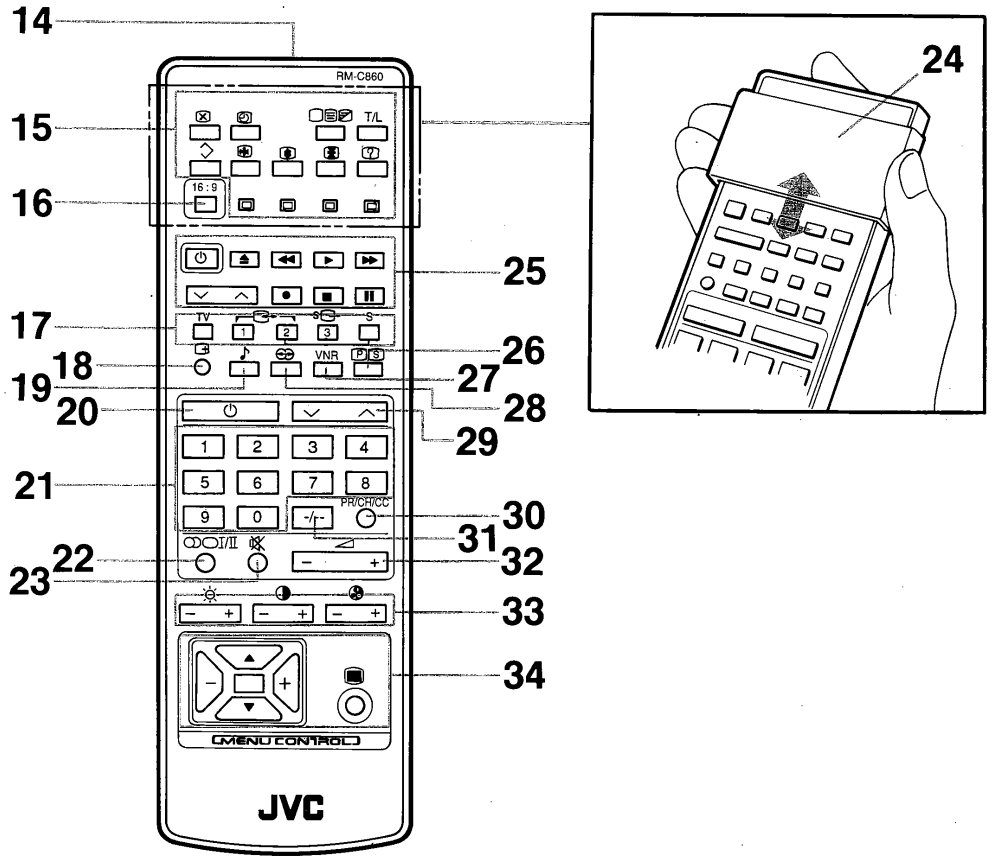
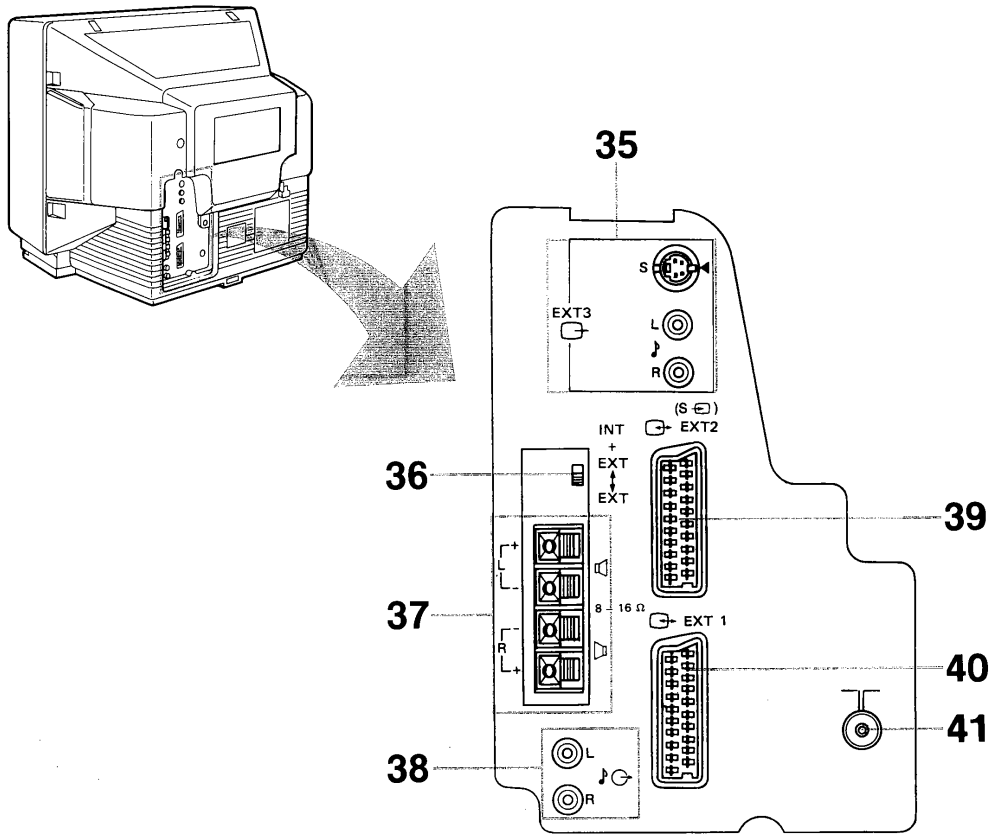


14. Remote Control signal emitting window (Point this directly at the front panel Remote Control sensor window)
15. Teletext operating section
16. 16:9 button (Aspect ratio 4:3/16:9)
17. Input mode select buttons
18. Display button ( )
19. Tone select button (♪)
20. Power button (⏻)
21. 10-Digit numeric keys
22. Sound multiplex button ( )
23. Mute button ( )
24. Sliding cover
25. Video Cassette Recorder operating section
26. PAL/SECAM button ( )
27. VNR (Video Noise Reduction) button
28. Acoustic Surround Processor button ( )
29. CHANNEL access button (∨ / ∧)
30. PR/CH/CC button (Programme Channel/Real Channel/Cable Channel)
31. -/- - button (1 digit/2 digits)
32. VOLUME button ( )
33. Picture adjustment controls (BRIGHT ( )/CONTRAST ( ) /COLOUR ( ))
34. "MENU CONTROL" operating section (Remote Control)

■ Rear Panel



35. EXT 3 connectors (directly-connected to front EXT 3)
36. Speaker select switch
37. External speaker terminals
38. Audio output connectors
39. EXT 2 connector
40. EXT 1 connector
41. Aerial socket

- **First Preparations**

1. Connect aerial. (See page 9.)
2. Install batteries into the Remote Control unit. (See page 9.)
3. Connect power cord to an AC outlet.

AERIAL CONNECTION

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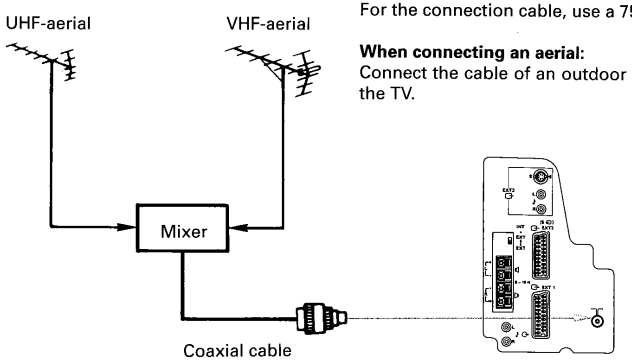
(Example)

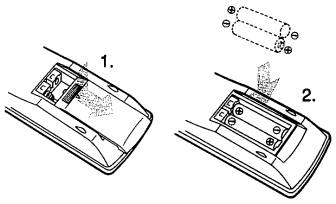


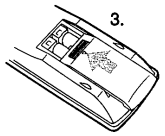
To receive television broadcasts (or teletext broadcasts), the aerial must be connected.

Important:
For the connection cable, use a 75-ohm coaxial cable.

When connecting an aerial:
Connect the cable of an outdoor aerial to the Aerial socket on the rear panel of the TV.

REMOTE CONTROL UNIT'S PREPARATION AND USE



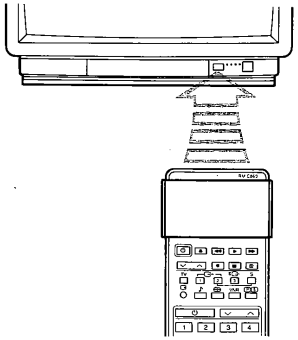


■ Preparation

Install two dry-cell batteries into the unit.

Important:
- Use "AA(R6)"-size dry-cell batteries.
  Do not use rechargeable batteries.
- Correctly install the batteries, observing (+/–) polarities.
- Follow the cautions printed on the battery.
- Duration of battery use is approximately 6 months to 1 year.
  (Duration varies depending on frequency of use.)
- If the Remote Control operates erratically, replace the batteries with new ones.

Battery installation:
1. Press and slide the cover off of the unit.
2. Insert a pair of batteries into the battery compartment. Correctly install them, observing (+/–) polarities.
3. Replace the cover.



■ Use

Point the Remote Control signal emitting window directly at the sensor of the TV set.

Important:
- The maximum operable distance is approximately 7 meters from the Remote Control sensor, and no more than 30° to either side of center.
- Take care that nothing is between the Remote Control and the sensor of the TV set.

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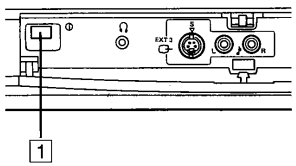
■ Basic Operating Procedure (via Remote Control)



1 Turning the main power on.

Press the Main power button on the front panel.
The Power indicator shows that the main power is on or off.

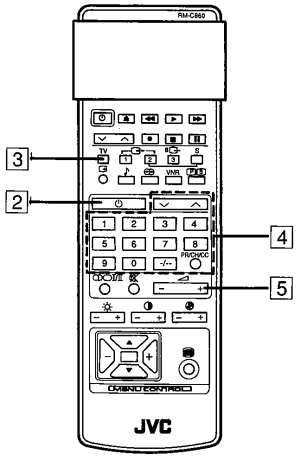
Main power	Power indicator
ON	LED ON
OFF	LED OFF

(Red)

- The Main power button is on the left end of the front panel controls.

2 Turning on the power.

Press the Power button.
The TV is now operating, and the on-screen information is displayed for a few seconds.
The Power indicator also shows if the power is on or off.



Main power	Power	Power Indicator
ON	ON	LED ON (dim)
	OFF	LED ON (bright)
OFF	—	LED OFF

Note:
- Pressing the TV button or the 10-Digit numeric keys on the Remote Control also turns the power on. When the power is turned on using the numeric keys, the channel corresponding to the number pressed will be selected.

3 Engaging the TV mode.

Press the TV button.
The display appears for about 3 seconds on the screen.

Note:
- If the TV mode is already engaged, it is not necessary to perform this operation.

4 Selecting a channel.

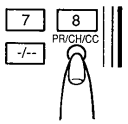
There are two types of channel selection: Real Channel and Programme Channel.

The program channel.
PR mode:
for storing broadcasting channel in advance in a position chosen by a user. The stored PR number will be selected.

Real Channel has CH mode and CC mode.
CH mode:
Corresponds with off-air TV broadcasting channel. The real broadcasting channel number will be selected.
CC mode:
Corresponds with cable TV broadcasting channel. The cable TV broadcasting channel number will be selected.
Concerning display of the real channel on the screen and broadcasting channel, see "TV/Cable Channel Frequency Comparison Table" on page 51 of the supplement.

A. Real Channel (CH mode and CC mode) Selection (e.g. CH25, CC20)

Important:
- If the on-screen display disappears during this mode, begin the procedure again.
- Real channels are CH02 to CH69 in CH mode, CC01 to CC41 and CC 75 to CC 79 in CC mode.

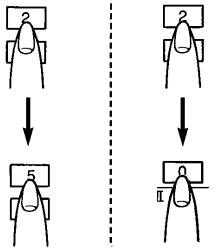


- All numerical inputs in real channel mode are performed by the 2-digit system. If it is left inputting 1 digit only, the channel will not change.

1) Engaging the Real Channel mode.
Press the PR/CH/CC button.
Confirm whether the channel mode is correct or not by observing the on-screen display.

Channel mode	On-screen indication
Real Channel	CH – –
	CC – –
Programme Channel	PR – (or PR – –)

(e.g. CH 25) (e.g. CC 20)



2) First enter the 10s digit of the 2-digit Real Channel number you wish to select.

(e.g. "2" for CH 25)
CH – – → CH 2 –

(e.g. "2" for CC 20)
CC – – → CC 2 –

3) Then, enter units digit. Press any numeric key.

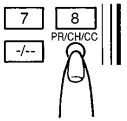
(e.g. "5" for CH 25)
CH 2 – → CH 25

(e.g. "0" for CC 20)
CC 2 – → CC 20

B. Programme Channel (PR mode) Selection

There are two methods of selection: direct selection and scanning selection.

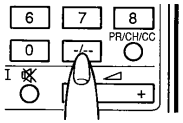
Important:
- Before selecting a channel, programme the channels.
  For programming procedures, see page 25.
- Up to 100 Positions are available for programming channels.
  (PR 01 - PR 99, AV (PR 00))



a. Direct selection

1) Engaging the Programme Channel mode.
Press the PR/CH/CC button.
Confirm the mode by observing the on-screen display.

Channel mode	On-screen indication	Number (s) to be entered
Programme Channel	PR –	1 digit
	PR – –	2 digits
Real Channel	CH – –	2 digits
	CC – –	2 digits

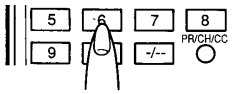


- When you wish to change the number (1 digit or 2 digits), press the -/- - button.

PR – ⟷ PR – –
(When entering 1 digit) (When entering 2 digits)

Notes:
- When entering a 1-digit number, only Programme Channels 0 to 9 can be selected.
- When entering a 2-digit number, any of the Programme Channels can be selected.
- "-/- -" button functions only when the programme channel mode is set.
- Even by pressing "-/- -" button only, it becomes programme mode.

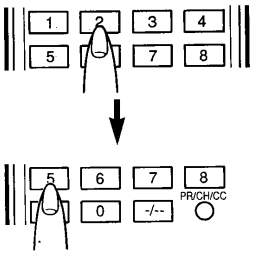
(e.g. PR 06)

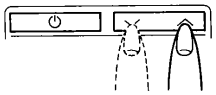


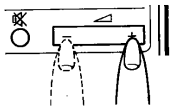
2) Entering the Programme Channel number you wish to select.
Press the numeric key(s).
- When entering a 1-digit number:
  (e.g. PR 06)
  Press "6" of the numeric keys.

PR – → PR 06

(e.g. PR 25)







- When entering 2-digit numbers:
  (e.g. PR 25)
  ① Press "2" (for 10s digit) of the numeric keys.
  PR – → PR 2 –
  ② Then, press "5" (for units digit) of the numeric keys.
  PR 2 – → PR 25

b. Scan selection in ascending order

Important:

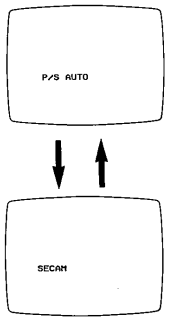
- Only those Programme Channels stored in memory can be selected.
- The Programme Channels which have been programmed to be skipped will be automatically skipped over during scanning.
- The Programme Channels which have been programmed to be guarded will be automatically skipped over during scanning.
- After pressing the Channel access button, the PR mode is engasged. (A 1-digit or 2-digit number can be entered.)

1) Press the CHANNEL access button.
   ∧ : Selects the next higher programme channel.
   (00 (AV) - - - → 99)
   ∨ : Selects the next lower programme channel.
   (00 (AV) ← - - - - 99)

5 Adjusting the audio volume.

Press the Volume button.
+ : increases the sound volume.
(00 - - - - → 50)
– : decreases the sound volume.
(00 ← - - - - - 50)

■ Changing the Reception System (PAL/SECAM)



Reception system can be changed by PAL/SECAM button (Ⓟ Ⓢ).
If the reception system is not correct, change it.

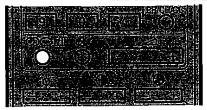
1) Press PAL/SECAM button (Ⓟ Ⓢ).
   The current mode is displayed on the screen.
2) Select mode.
   Mode changes every time when PAL/SECAM button (Ⓟ Ⓢ) is pressed.

P/S AUTO → SECAM

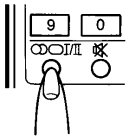
P/S AUTO: Automatically switches between PAL and SECAM colour systems according to the incoming video signal.

SECAM: If the receiving condition in P/S AUTO mode is not good, set it to SECAM mode by pressing PAL/SECAM button (Ⓟ Ⓢ).

■ Sound multiplex broadcast reception (stereo/dual sound)



(Green)



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This TV set incorporates a sound multiplex decoder that can receive stereo broadcasts and any accompanying second audio programme, such as a bilingual broadcast.

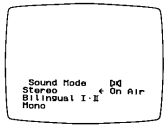
Important:

- When receiving Sound multiplex broadcast (stereo or dual sound), Sound multiplex indicator (green) lights.

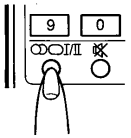
1 Stereo listening

When receiving a stereo broadcast, stereo sound can be listened to.

1) Press the sound multiplex button. (◌◌I/II)
   The **"Sound Mode"** indication appears on the screen.



- When a stereo programme is being broadcast the " ← **On Air"** indication appears to the right of the **"Stereo"** indication.
- While receiving stereo broadcast, the sound multiplex indicator (green) lights.



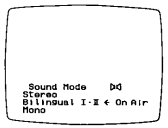
2) Selecting the Stereo Sound mode
   Each pressing of the Sound multiplex button (◌◌I/II) changes the mode in the following order. (The selected mode is magenta coloured.)

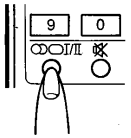
Stereo → Bilingual I → Bilingual II → Mono

2 Listening to a bilingual broadcast (Bilingual I or Bilingual II sound)

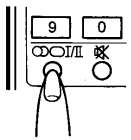
When receiving a bilingual broadcast, sound of either Bilingual I or Bilingual II can be selected for listening.

1) Press the Sound multiplex button. (◌◌I/II)
   The **"Sound Mode"** indication appears on the screen.





- When a Bilingual I • Bilingual II sound is being broadcast, "← **On Air"** indication appears to the right of the **"Bilingual** I • II**"** indication.
- When receiving a dual sound broadcast, the Sound multiplex indicator (green) lights.



2) Select either the Bilingual I or Bilingual II mode.
   Each pressing of the Sound multiplex button (◌◌I/II) changes to the mode in the following order.
   (The selected mode is magenta coloured.)

Stereo → Bilingual I → Bilingual II → Mono

Notes:

- To the right of the Normal sound mode, **"← On Air"** indication does not appear.
- For the relationship between Broadcasting Mode and Sound Mode Select, refer to the following table.

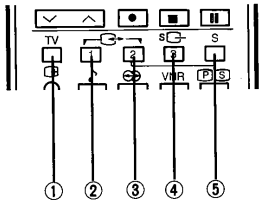
Relationship between Broadcasting Mode and Sound Selection

Select Broadcast signal (Transmitting signal)	"← On Air" indication	Sound Mode Select	Output Sound	Acoustic Surround Procession Effect (H/S)
Stereo	Stereo	Stereo	Stereo	H
		Bilingual I	Stereo	S
		Bilingual II	Stereo	S
		Mono	Monaural	S
Bilingual	Bilingual I, II	Stereo	Bilingual I	S
		Bilingual I	Bilingual I	S
		Bilingual II	Bilingual II	S
		Mono	Monaural	S
Monaural	——	Stereo	Monaural	S
		Bilingual I	Monaural	S
		Bilingual II	Monaural	S
		Mono	Monaural	S

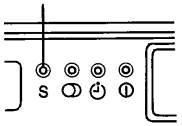
Note:
H: HALL EFFEX, S: STEREO EFFEX (See page 17.)

SWITCHING THE INPUT MODE (TV, EXT 1, EXT 2 AND EXT 3)
(VIEWING PICTURES FROM A CONNECTED COMPONENT)

Press any of the Input mode select buttons.



(Front panel)
S-input select indicator (yellow)



Mode	Input mode select button	Indication	S-input select indicator	Input connector
TV	① TV button	CH--, CC-- or PR--	LED OFF	RF input from aerial terminal
EXT 1	② EXT 1 button (→ 1)	EXT 1	LED OFF	Input from EXT1 connector
EXT 2	③ EXT 2 button (→ 2)	EXT 2	LED OFF	Input from EXT2 connector (When a composite video signal is input)
	+ ⑤ S button*	EXT 2	LED ON	Input from EXT 2 connector (When S-VIDEO signals are input)
EXT 3	④ EXT 3 button (S→ 3)	EXT 3	LED ON	Input from EXT3 connector (S-VIDEO input)

*: Both a composite video signal and S-VIDEO separated Y/C signals can be input via the EXT 2 connector. When inputting separated Y/C signals into the EXT 2 connector, engage the EXT 2 mode and press the S-input select button. The S-input select button only operates with the EXT 2 mode engaged.

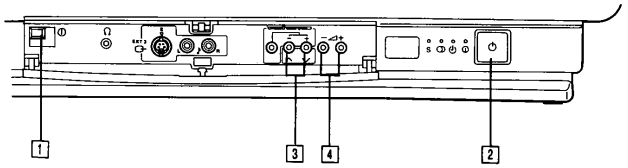
Switching priority of EXT 1 connector (SLOW SW preferential function)
If playback is started with a Video Cassette Recorder connected to the EXT 1 connector, the present mode is automatically released and is switched to the EXT 1 mode. If no switching of input mode is performed during playback of the Video Cassette Recorder, the previous mode is automatically restored when the Video Cassette Recorder is stopped.

- Also, note the following:

Effective Video Cassette Recorder: A Video Cassette Recorder equipped with the playback TV switching function.

After the EXT 1 mode has been engaged during Video Cassette Recorder playback:
Another input mode can be selected manually while the Video Cassette Recorder is playing back a cassette. If the input mode is not switched, the TV will automatically return to the previous mode when playback on Video Cassette Recorder is stopped, when the Video Cassette Recorder power is turned off, or when the Video Cassette Recorder is disconnected from the TV.

VIEWING TV BROADCASTS VIA FRONT-PANEL CONTROLS



1 Press the Main power button to turn the main power on.

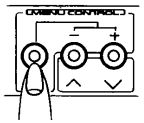
2 Press the Power button to turn the power on.

3 Press the Channel access buttons to select a channel.
(Programme Channel selection is possible.)

4 Press the Volume buttons to adjust the audio volume.

SWITCHING INPUT MODE VIA FRONT-PANEL CONTROLS

(Front panel)



- Also, when using the front panel controls (Menu Control section), some modes may be changed and adjusted.

Operation:

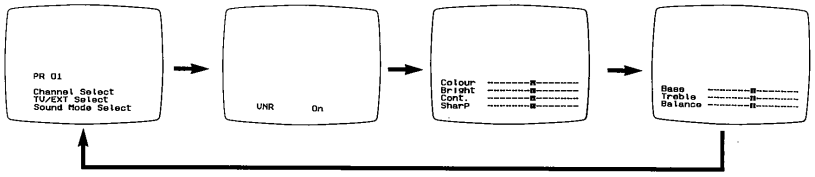
1 Press the MENU button to select the mode. Each pressing of the button calls up the modes for changing or adjustment in the following order. The mode to be changed or adjusted turns to magenta colour.

1) Channel Select
2) TV/EXT Select
3) Sound Mode Select

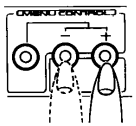
4) VNR On/Off

5) Picture adjustment
- Colour
- Bright
- Cont.
- Sharp

6) Audio adjustment
- Bass
- Treble
- Balance

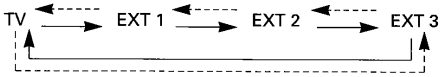


(Front panel)

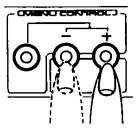


2 Press the Control (–/+) buttons to change or adjust.
- If the on-screen display disappears, press the MENU button again, and re-select the mode you wish to change or adjust.
- When no indication appears on the screen, the Control (–/+) buttons function as Channel access buttons.

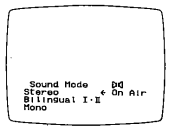
1) When in the Channel Select mode:
Press the Control (–/+) buttons to select a Programme Channel.
2) When in the TV/EXT Select mode:
Press the Control (–/+) buttons to enter the TV, EXT 1, EXT 2 or EXT 3 mode.



(Front panel)

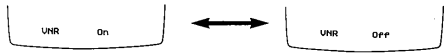


3) When in the Sound Mode Select mode:
Press the Control (–/+) buttons to obtain the following on-screen display for sound mode selection.

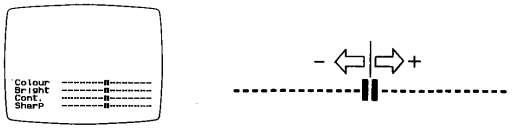


Stereo → Bilingual I → Bilingual II → Mono

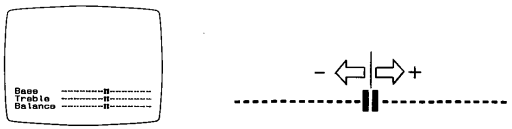
4) When in the VNR mode:
Press the Control (–/+) button to turn the mode on or off.



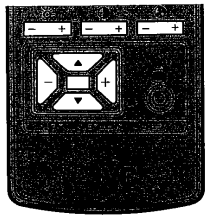
5) When in the picture adjustment mode:
Press the Control (–/+) buttons to select any of the items for picture adjustment.
The reference marker moves right or left.



6) When in the audio adjustment mode:
Press the Control (–/+) buttons to select any of the items for audio adjustment.
The Reference marker moves right or left.



PICTURE/SOUND OPERATIONS

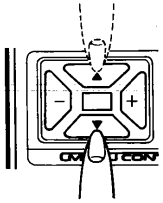


■ Picture/Sound Level Adjustments

Press the ▲, ▼, + and – buttons on the Remote control to adjust the selected items.

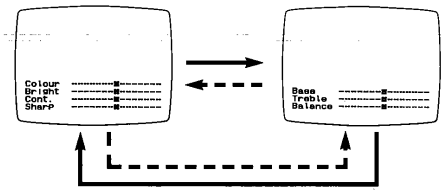
Important:

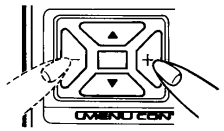
- After having adjusted picture levels, if the input mode (TV, EXT 1, EXT 2 or EXT 3) is switched, or the power is turned off and on again, the picture levels are restored to the levels that have been stored in memory with the Video Status Memory function.
  Refer to **"Video Status Memory"** on page 22.
- Audio-level adjustments are not affected by the above. (There is no change in audio adjustment, even if the input mode is changed or the power is turned off and on again.)

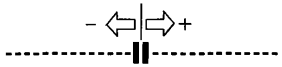


Operation:

1 Press the ▲ or ▼ button to select the item you wish to adjust.
The selected item turns magenta colour.

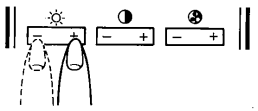






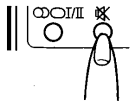
2 Press the + or – button to adjust the level.
(The marker moves to right or left.)

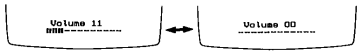
–button	Item	+button
Low	Colour	High
Dark	Bright	Bright
Low	Cont.	High
Soft	Sharp	Sharp
Low	Bass	High
Low	Treble	High
Left	Balance	Right



Notes:
- While the picture or audio adjustment indication is displayed on the screen, adjustment is possible.
- The picture brightness (☼), contrast (◑) and colour (✇) adjustment have exclusive adjustment buttons for direct control.

■ Sound Muting



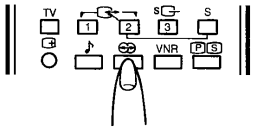


This is convenient for answering phone calls, etc.

Important:
- While the TV is engaged in the sound mute mode, if the power is turned off and on again, the sound mode or surround mode that has been selected will be released. (The volume will revert to the level set before muting.).

Operation:
1. Press the Mute button. (The sound level will be reduced to zero "00" immediately.)
2. Press the button again. (The former sound level is automatically restored.)
   * While in the sound mute mode, pressing of the Volume "–" button resets the sound level to "00".
   * While in the sound mute mode, pressing of the volume "+" button releases the sound mute mode and increases the sound level by an increment of 1 reference number.

■ Listening To Surround Effect Sound



(e.g. SURROUND Off)

This TV set incorporates Acoustic Surround Processor circuitry. Surround effect sound with concert-hall presence can be enjoyed. (In combination with external speakers, more effective surround sound can be obtained.)

Operation:
1. Press the Acoustic Surround Processor button. (⟲)
   (The current mode display appears.)
2. Press the Acoustic Surround Processor button (⟲) repeatedly to obtain the mode of your choice.
   (Select the mode while the indication is displayed.)

SURROUND Off → LIVE EFFEX * → HALL EFFEX ** or STEREO EFFEX**

Mode	Effect
SURROUND Off	Normal
LIVE EFFEX*	Surround effect sound with live-performance presence
HALL EFFEX**	Surround effect sound with concert-hall presence
STEREO EFFEX**	Monaural sound with stereo-like effect

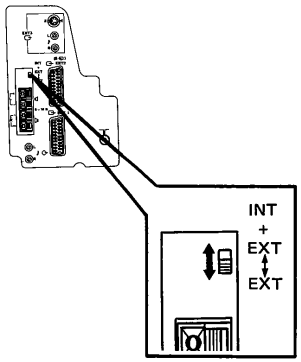
* : In the Mono, Bilingual I or II monaural sound, LIVE EFFEX sound has no effect. (LIVE EFFEX sound can only be listened to when the audio source is stereo.)

** : Depending on the following conditions, HALL EFFEX or STEREO EFFEX sound is selected:

Indication (Select mode)	Conditions
HALL EFFEX	● In the sound marked with "H" shown in the Table on "Relationship between Broadcasting Mode and Sound Selection" on page 14 (STEREO). ● When in the VIDEO mode (EXT1, EXT2 or EXT3)
STEREO EFFEX	● In the sound marked with "S" shown in the Table on "Relationship between Broadcasting Mode and Sound Selection" on page 14.

● Neither LIVE EFFEX nor HALL EFFEX can be listened to when the audio source is monaural in the VIDEO mode.

■ Listening To Sound via Built-in Speakers or External Speakers



Important:

● For external speakers to be connected to the external speaker terminals, use speakers of 8 to 16-ohm impedance.

Operation:

■ To select sound from the built-in speakers or from external speakers, use the speaker switch.

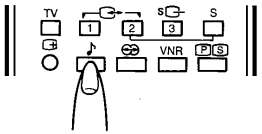
Speaker switch position	Selected speakers	
	Built-in speakers	External speakers connected to the External speaker terminals
INT + EXT	Sound output	Sound output
EXT	No sound	Sound output

■ Selecting Sound Tone You Prefer

5 selections of **"1. Soft"**, **"2. Clear"**, **"3. Heavy"**,. **"4. Vocal"** and **"5. User Position"** are possible.

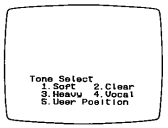
Important:

● Only in **"5. User Position"** is the sound tone variable. Adjustment and storage can be performed in advance in **"3. Tone Preset"** of the Menu items.

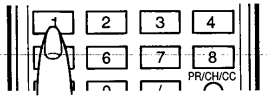


Operation:

1. Press the Tone select button(♪).
   The following display appears. (The indication remains displayed until one of the items is selected.)



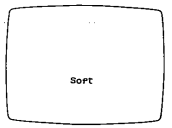
(e.g. 1)

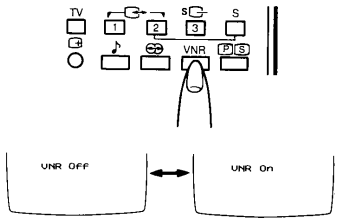


2. Press the numeric key (1 – 5) corresponding to the sound tone you prefer.
   The selected item is displayed for about 3 seconds.

Numeric key	Indication
1	Soft
2	Clear
3	Heavy
4	Vocal
5	User Position

(e.g. soft)





■ Reducing Picture Noise

Set the VNR (Video Noise Reduction) function to ON; noise appearing on the picture is reduced and noisy pictures are softened.

Operation:

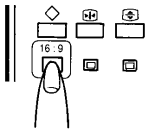
1. Press the VNR button. The indication is displayed for about 3 seconds.
2. While the indication is displayed, press the VNR button again. This switches from **"VNR Off"** to **"VNR On"**.
   (When the picture is noisy, set to **"VNR On"**.)
   (For normal pictures, set to **"VNR Off"**.)

■ Switching the Aspect Ratio (4:3 – 16:9)

Changing the aspect ratio of the screen is possible.

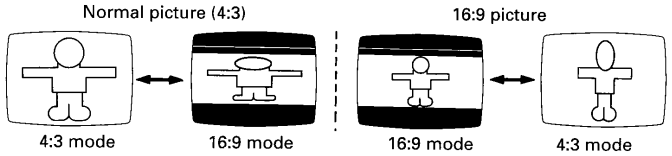
Important:

- The standard television broadcast aspect ratio is 4:3.
- Turning the main power off and on restores the normal aspect ratio of 4:3.
- No indication of "Aspect Ratio" on the screen appears.
- When connecting a D/D2-MAC decoder and viewing the picture, set to the appropriate ratio.
- For connecting and operating a D/D2-MAC decoder, refer to the instruction manual for that component.
- In the aspect ratio of 16:9, horizontal lines may appear on the upper part of the screen. This is normal.
- It is not recommended to view a regular programme of an aspect ratio of 4:3 in 16:9 mode, in order to use the surface of the picture tube uniformly.

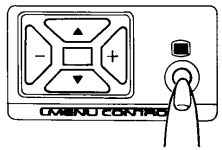


Operation:

Each pressing of the 16:9 button switches between 16:9 and 4:3.
For example, when the scene in the picture is squeezed vertically and expanded horizontally, or vice versa, set the aspect ratio to the appropriate ratio.

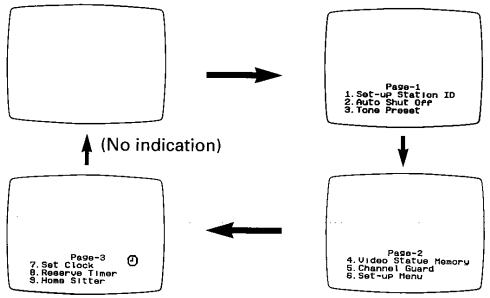


OPERATING MENU FUNCTIONS



■ To Call Up a Menu Display

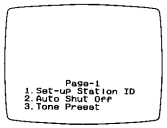
Press the MENU button (■)of the Menu Control section (on the Remote Control).
A Menu Page display appears on the screen. A 3-Page Menu is available; each pressing of the MENU button (■) accesses the next Menu page in ascending order.



First call up the Menu Page you want, then press a numeric key corresponding to the number of the operation you want to perform. (Refer to the instructions for each function.)

ENGLISH

1 Set-up Station ID



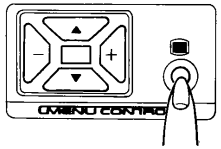
Station ID for a Programme Channel can be displayed below the on-screen indication. Set as desired.

Important:

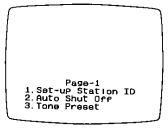
- 4 of the following letters and symbols may be combined on each on-screen display.
  "0, - 9, A - Z, a - z &, : , . , - , _ , and (blank)"
- Indication of station ID is only possible in the Programme Channel mode. Station ID can be memorized for up to 36 different channels with setting of external video input mode.
- If a letter for a 37th channel is input, the message **"Memory Overflow !!"** appears.
- If you wish to cancel the station ID you have stored, enter blanks into all the 4 letter positions, then reset.
- In addition to setting the station ID, it is also possible to indicate external video input modes (EXT 1, EXT 2 and EXT 3).
- When the indications for each of the external video input modes (EXT 1, EXT 2 and EXT 3) are all stored in memory, station ID for Programme Channels can be memorized for up to 33 channels. (This means up to 36 sets of data in all can be stored in memory).

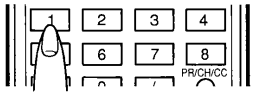
Setting the Station ID

1. Tune to a Programme Channel whose station ID you wish to add.
   (e.g. PR 01)

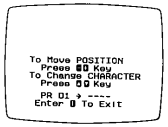


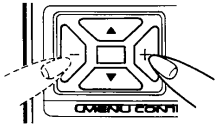
2. Press the MENU button (■) to call up the Page-1 Menu.



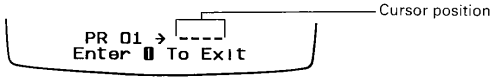


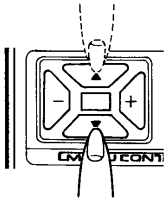
3. Press "1".
   The following on-screen display appears.



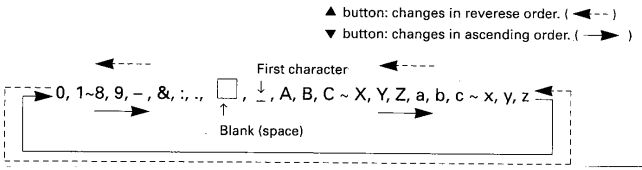


4. Press the Control (–/+) buttons of the Menu Control section to move the "cursor" position. The cursor turns magenta colour.

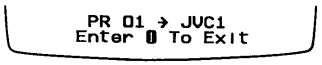


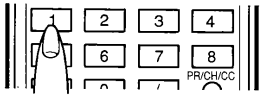


5. Press the Control (▲ / ▼) buttons to select a letter (or a character) you wish to enter.
   A letter (or other character) changes as follows:

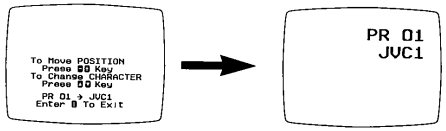


6. Repeat steps 4 and 5 to enter additional station ID of up to 4 characters. (If wrong character was input, take the same procedure)
   (e.g. PR 01 to "JVC 1")



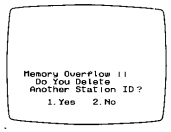


7. Press numeric key 1. "PR01→JVC 1" blinks once to indicate that the station ID you have entered have been memorized and the Menu mode is released. (When in the on-screen display mode)



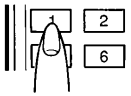
(When in the on-screen display mode)

* Repeat steps 1 to 7 to store station ID for other Programme Channels (or external video input modes) in memory.



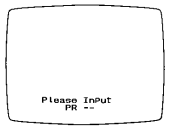
■ When the message "Memory Overflow!!" appears

- If the following on-screen indication appears when "1" of the on-screen Menu is selected, it means another Programme Channel's station ID cannot be set.
- If any Programme Channel's station ID are deleted from storage, another Programme Channel's station ID can replace them.
- Perform the following operation, if desired.
- If you do not wish to set a Programme Channel, press "2" to exit the mode.

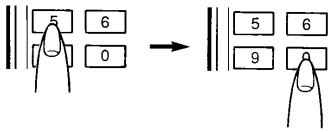


Operation:

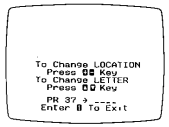
1. Press "1".
   The following indication appears.



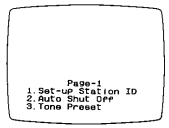
(e.g. Delete PR50)



2. Enter 2 digits of the Programme Channel you wish to delete from memory. The following indication appears. Perform the operation described previously for storage of station ID.



- If you select a Programme Channel whose station ID have not been stored in memory, the **"Memory Overflow !!"** indication appears. Re-select the Programme Channel.

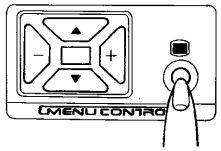


2 Auto Shut Off

With this function, when the TV is on, and no signal is being received for a certain time, the TV power switches off automatically. So, when you fall asleep without turning the TV power off, the TV switches off automatically when no more programmes are broadcast for the day.

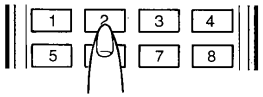
Important:

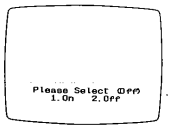
- If no signal is being received for about 10 minutes, power switches off automatically.
  (when this function is set to **"ON"**)
- This function also operates when a received signal is very weak. (e.g. when it cannot be tuned in by the Auto Search scanning in the Programme mode)
- This functions only in the TV mode (except for the Channel Programming mode).

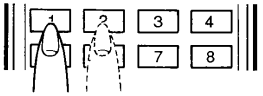


Setting the Auto Shut Off:

1. Press the MENU button (■) to call up Page-1 Menu.
2. Press "2".
   The following appears on the screen.
   The current setting is indicated in parenthesis.



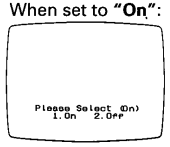




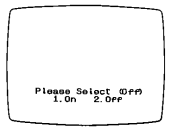
3. Press "1" or "2".
   "1": to set **Auto Shut Off** function to (**On**)
   "2": to set **Auto Shut Off** function to (**Off**)
   The selected setting turns magenta colour, and the on-screen display

changes into the following. Setting is completed, and the on-screen indication disappears in about 3 seconds.

When set to **"On"**:

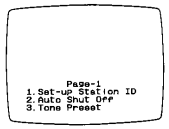


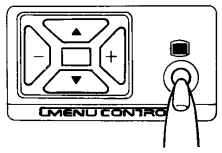
When set to **"Off"**:

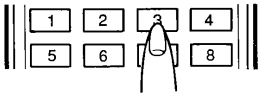


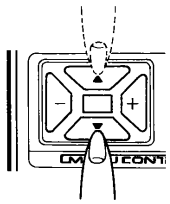
3 Tone Preset

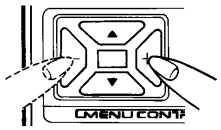
This function, the "SSM" (Sound Status Memory), allows presetting of **"Bass"** and **"Treble"** sound tone levels, which are available when selecting **"5. User Position"** by using the Tone select button (♪).

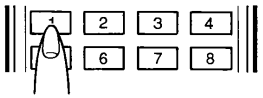


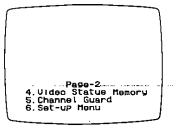










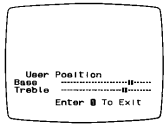


Important:

- Sound tone presetting is only possible for **"5. User Position"**.
- **"1. Soft"**, **"2. Clear"**, **"3. Heavy"** and **"4. Vocal"** sound tone settings cannot be altered.
- For each source selection (TV or external video input mode EXT 1, EXT 2 or EXT 3), the SSM setting will be the same.
- SSM operation has no effect on balance setting between speakers.
- The selected sound tone (by selecting a sound tone 1 to 5 using the Tone select button (♪), or by adjusting bass or treble directly) always will be restored to the level that has been previously set, even if a different channel is tuned to, an input mode is switched, or TV power is turned off and on again. Therefore, in order to re-adjust the sound tone, first press Tone select (♪), then press 1 to 5 to select a different sound tone, or re-adjust bass or treble directly.

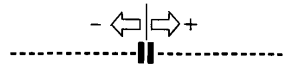
Setting the sound tone:

1. Press the MENU button (■) to call up Page-1 Menu.
2. Press "3". The following appears on the screen.



3. Select **"Bass"** or **"Treble"** with the Control (▲ / ▼) buttons of the Menu Control section. The selection turns magenta colour.
4. Press the Control (–/+) buttons of the Menu Control section to adjust the level. The marker moves.
   + button: marker moves right.
   – button: marker moves left.

– button	Item	+ button
Low	Bass	High
Low	Treble	High



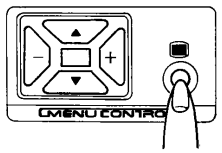
5. Repeat steps 3 and 4 to complete tone adjustment.
6. Press "1".
   The **"User Position"** indication blinks once.
   The on-screen indication disappears in about 3 seconds to indicate setting is completed.

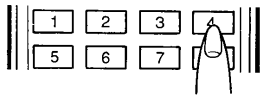
4 Video Status Memory

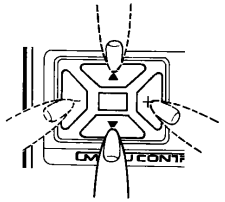
A VSM (Video Status Memory) setting can be made for each individual source selection (TV or external video input modes EXT 1, EXT 2 and EXT 3).
After setting of the VSM, the **"Colour"**, **"Bright"**, **"Cont."** and **"Sharp"** can be adjusted as usual. However, when an input mode is switched or TV Power is turned off and on again, their settings will be restored to the VSM settings that were previously made.

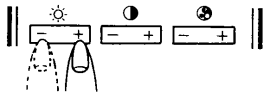
Important:

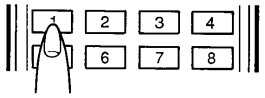
- For the TELETEXT and MIX modes, the VSM function has no effect.
- Even if the on-screen background is set to ON with **"4. Message Style"** of the **"6. Set-Up Menu"** feature, no background appears behind the on-screen indication for the VSM setting.

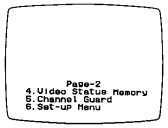






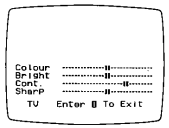






Setting the Video Status Memory:

1. Select the source you wish to set (TV, EXT 1, EXT 2 or EXT 3).
2. Press the MENU button (■) twice to call up Page-2 Menu.
   (The following operation can be performed while any of the on-screen Menus (Page-1, Page-2 or Page-3) is displayed.)
3. Press "4".
   The following appears on the screen.



4. Press the Control buttons (▲ / ▼ /+/–) of the Menu Control section to adjust each item, while checking the display.
   ▲ / ▼ button : Press to select the item you wish to adjust.
   The magenta-coloured item can be set.
   +/– button : Press to set the level of the item of your choice. The marker moves according to the specified level.

– button	Item	+ button
Low	Colour	High
Dark	Bright	Bright
Low	Cont.	High
Soft	Sharp	Sharp

* **"Bright (☼) "**, **"Cont. (◑)"** and **"Colour ( )"** also can be adjusted directly by pressing each corresponding button on the Remote Control.

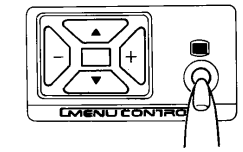
5. Press "1".
   The input mode indication (TV, EXT 1, EXT 2 or EXT 3) positioned on the lower left of the screen blinks once. The on-screen indication disappears in about 3 seconds to show the setting is completed.
   * Repeat steps 1 to 5 to store each input mode setting in memory TV, EXT 1, EXT 2 and EXT 3.

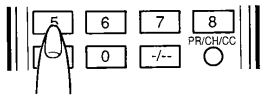
5 Channel Guard

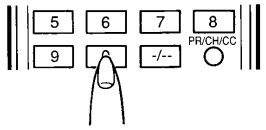
This allows a channel to be guarded so it cannot be tuned to without an ID number.
This is effective to prevent children from viewing channels you do not want them to view.

Important:

- Up to 4 Real Channels may be guarded. When Real Channels have been memorized in Programme Channel Positions, these same Programme Channels can be guarded.
- Entering of 3-digit ID number allows a guarded channel to be viewed.
- Timer setting for a guarded channel is not possible.
- The ID numbers for guarded channels are cleared if a power failure occurs (or the main power is switched off).
  The ID number can also be re-set if forgotten by disconnecting from the main power. The ID number for any guarded channels will then be "000".
- When selecting a Programme Channel using the Channel access buttons, guarded channels are automatically skipped.
- When Programming is being performed or when the main power is turned on after having been turned off, all channels, including guarded channels, can be selected.

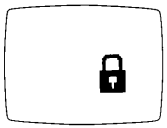




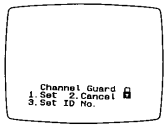


■ Setting Guarded channels:

1. Press the MENU button (■) twice to call up the Page-2 Menu.
   (The following operation can be performed while any of the on-screen Menus (Page-1, Page-2 or Page-3) is displayed.)
2. Press "5".
   A "padlock" illustration appears on the screen for about 5 seconds.



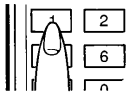
3. Press "0" while the illustration is displayed.
   The following display appears.

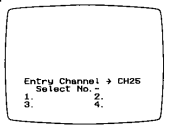


4. Press "1", "2" or "3" to select the item.

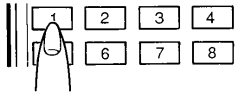
To set a guarded channel (1. Set)

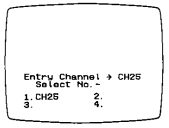
① Press "1".
The following display appears.



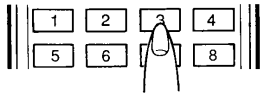


② Press "1", "2", "3" or "4" to select the position.
The number of the currently tuned-to Real Channel appears at the selected position.
The on-screen indication disappears in about 3 seconds to show the setting is completed.
Repeat the above procedure to set up to 4 guarded channels.

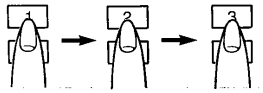




- If the position you select has already been assigned for a certain channel, the channel is cleared from that position, and a setting of a new channel is possible.

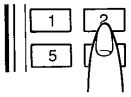


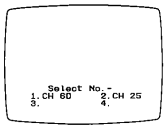
(e.g. 123)



To clear a guarded channel (2. Cancel)

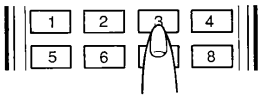
① Press "2".
The following screen appears.

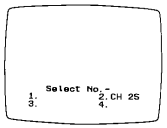




② Press "1", "2", "3" or "4" to select the position where the channel number you wish to clear is assigned.
The Real Channel number in the position you selected disappears. The on-screen indication disappears in about 3 seconds to show the clearing operation is completed.
When cancelling more than one guarded channel at the same time, enter their position numbers sequentially.

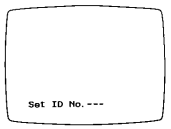
(e. g. Clear CH 60)



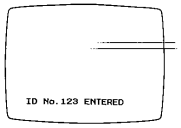


To set ID number (3. Set ID No.)

① Press "3".
The following on-screen display appears.



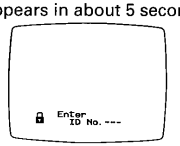
② Press any combination of 3 numeric keys you wish to store as an ID number.
(e.g. "1" → "2" → "3")
After pressing the 3rd numeric key, the following appears, then disappears in about 4 seconds to show the setting is completed.



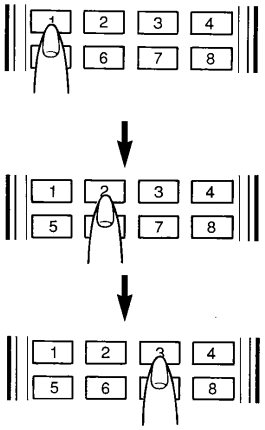
- Be sure to key in 3 numbers.
  If the mode is exited before the 3 numbers are keyed in, the ID number you have keyed in will also be cleared.
  * Only one ID number can apply to each of the 4 guarded channels.
  *Follow the same procedure to reset an ID number when you forget it. Also, if there is a power failure, all ID numbers will be set to "000".

■ Selection of a guarded channel

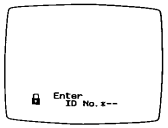
1. When a guarded channel is selected, the following display appears. The on-screen indication disappears in about 5 seconds.



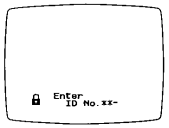
(e.g. 123)



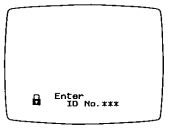
2. Enter a 3-digit ID number while the above indication is displayed.
   (ID number example: "1" → "2" → "3")
   ① Press "1".



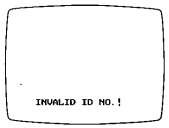
   ② Press "2".



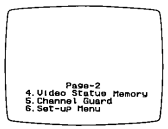
   ③ Press "3".

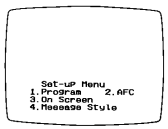


   • When the correct ID number is keyed in, access to the guarded channel is allowed.
   If an incorrect ID number is keyed in, the following indication appears to show that the access to the guarded channel has not been allowed.



6 Set-up Menu





When using your TV set for the first time, the functions to be preset are conveniently accessible through this Menu.

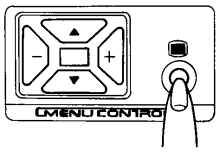
① **PROGRAM**
② **AFC ON/OFF**
③ **ON SCREEN ON/OFF**
④ **MESSAGE STYLE**

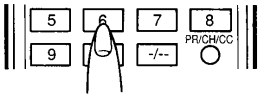
① PROGRAM

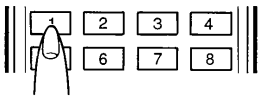
This allows presetting of each Programme Channel. Programme Channel selection is possible only by presetting the Programme Channel position.

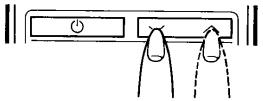
Important:

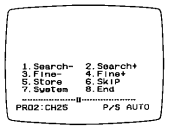
- The AFC (Automatic Fine-frequency Control) function operates in Auto Search.
- Channels transmitting a weak signal may be skipped.
  (In this case, use Fine tuning to tune to the channel more accurately.)
- In Auto Search, if a signal other than a regular TV broadcast is being received, the search function may stop there.
  Perform the search function again.
- Channel Positions you do not wish to view can be skipped using the Channel access buttons. Refer to the instructions below.

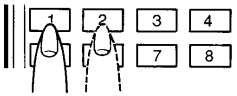


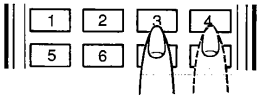








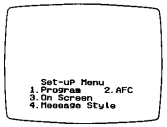




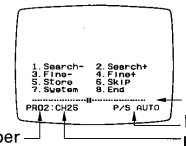
- In the Programme mode, if a Channel Position that has been skipped is called up, no Real Channel number indication appears even if a broadcast is received.
- When playing back a video programme with a Video Cassette Recorder, etc. through the RF (Aerial) connection, use the Programme Channel "PR 00 (AV)".
- Up to 100 positions are available for programming channels. (PR01-PR99, AV (PR00))

Basic channel presetting:

1. Press the MENU button (■) twice to call up the Page-2 Menu.
   (The following operation can be performed while any of the on-screen Menu Pages (Page-1, Page-2 or Page-3) is displayed.)
2. Press "6". **(6. Set-Up Menu)**
   The following display appears.



3. Press "1". **(1. Program)**
   The following display appears.



Fine tuning bar scale
Reception system
Programme Channel number
Real Channel number

4. Select the channel you wish to programme using the CHANNEL access buttons.
5. Tune to a broadcast directly or with the Auto Search function.
   - **Auto Channel selection:**
     Press "1" **(1. Search –)** or "2" **(2. Search +)**. The selected item turns magenta colour during search.
     The Programme Channel number and Real Channel number indications turn magenta and green colour, respectively.

     "1. Search –" changes Real Channel numbers in descending order.
     "2. Search +" changes Real Channel numbers in ascending order.

     Note:
     If search operation beyond the highest frequency is attempted, the frequency cycle restarts, beginning with the lowest-frequency channel, and continues in ascending order. The same is true for reverse search: Beyond the lowest frequency, the cycle restarts, beginning with the highest frequency, and continues in descending order.

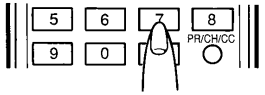
   - **Direct channel selection:**
     Press the PR/CH/CC button to engage the Real Channel mode. (indication: CH – – or CC– –) Then, press the numeric keys (be sure to enter a 2-digit number) corresponding to the Real Channel that you wish to tune to. (CH 02 – CH 69/CC01 – CC41 and CC75 – CC79)
     Every time any PR/CH/CC button has been pressed, CH – – and CC – – alternate.
6. Perform fine tuning, if necessary.

   - **Fine tuning operation:**

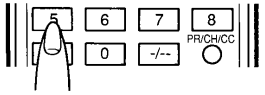
   Press "3" **(3. Fine –)** or "4" **(4. Fine +)** to obtain a clearer picture.
   The selected item turns magenta colour.

   The **"3. Fine –"** adjusts to a slightly lower frequency. (The Fine tuning bar scale moves left.)
   The **"4. Fine +"** adjusts to a slightly higher frequency. (The Fine tuning bar scale moves right.)

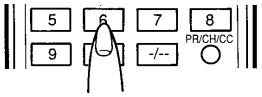
Note:
- Frequency adjustment continues for as long as the button is pressed down.



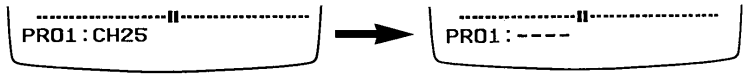
7. PAL/SECAM system setting.
   Press "7" **(7. System)**.
   Display of P/S AUTO and SECAM alternate.
   P/SAUTO mode : Automatically receive PAL or SECAM colour system.
   SECAM mode : Manually select SECAM colour system reception when P/S AUTO mode gives poor result.

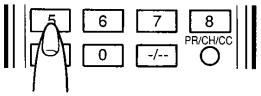


8. Press "5" **(5. Store)** to store an adjusted broadcast in memory. The Programme Channel number appearing on the screen advances by one number.
9. Repeat steps 5 to 8 to preset all channels.
10. Set skips across Programme Channels which have not been preset to bypass them.

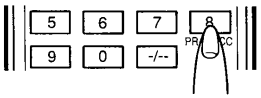


To set a channel to skip:
Press "6" **(6. Skip)**.
The on-screen Real Channel indication turns into "----" to show that the channel has been set to **"Skip"**.





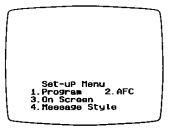
To restore a skipped channel:
Select the Programme Channel number which has been set to be skipped, and press "5" **(5. Store)**.



11. After completing the setting of all channels, press "8" **(8. End)** to exit the mode.

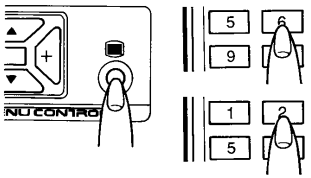
② AFC ON/OFF

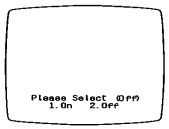
This turns the AFC (Automatic Fine-frequency Control) function ON or OFF.
The AFC function automatically fine adjusts and holds the frequency of the video signals to obtain optimum reception.



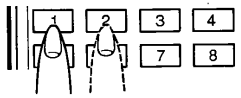
Important:
- AFC for all Programme Channels is set to either ON or OFF.
- When Real Channel selection is performed, the AFC is applied, regardless of the ON/OFF setting.

To set the AFC:
1. Press the MENU button (■) twice to call up the Page-2 Menu.
2. Press "6". **(6. Set-up Menu)**
3. Press "2". **(2. AFC)**
   The following display appears.
   The current setting is indicated in parenthesis.



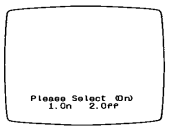


4. Press "1" or "2".
   "1": to switch on the AFC function **(On)**
   "2": to switch off the AFC function **(Off)**

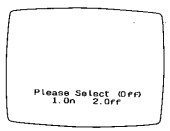


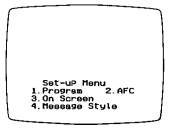
The selected item turns magenta colour, then it changes to the display shown below. The on-screen indication disappears in about 3 seconds to show the setting has been made.

When AFC is set to **"On"**:



When AFC is set to **"Off"**:



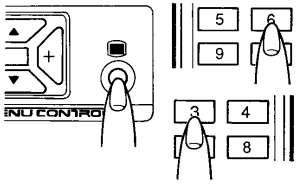


③ ON SCREEN ON/OFF

If on-screen indications are not necessary, they can be set so they are not displayed.

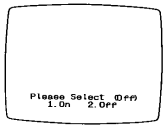
Important:

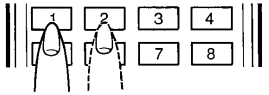
- When the **"ON SCREEN ON/OFF"** function is set to **"OFF"**, the following on-screen indications are not displayed:
  - Channel indication in channel selection
  - Volume indication for audio volume and mute
  - Sound Mode Select indication
  - Regular channel indication
  - Clock indication
- When this function is set to OFF, if the Display button is pressed, the overall Timer Status display appears for about 5 seconds.



To set the On screen function:

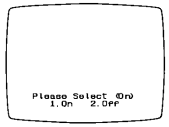
1. Press the MENU button (■) twice to call up the Page-2 Menu.
2. Press "6". **(6. Set-Up Menu)**
3. Press "3". **(3. On Screen.)**
   The following display appears.
   The current setting is indicated in parenthesis.



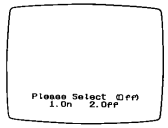


4. Press "1" or "2".
   "1": to set for on-screen indications to be displayed **(On)**
   "2": to set for on-screen indications not to be displayed **(Off)**

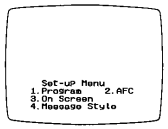
   The selected item turns magenta colour, then changes to the display as shown below. The on-screen indication disappears in about 3 seconds to show that the setting has been completed.



When set to **"On"**:



When set to **"Off"**:

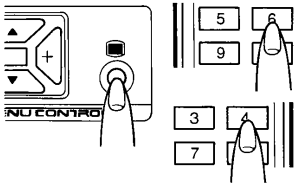


④ MESSAGE STYLE

Either of two types of on-screen displays (with or without black background) can be selected.

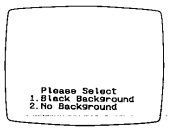
Important:

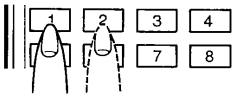
- On-screen displays with or without black background are available for the settings, such as the Menu displays.
- On-screen displays for VSM (Video Status Memory), SSM (Sound Status Memory), and regular channel and timer status indications appear without a background.



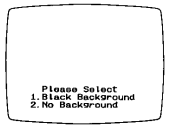
Setting the Message Style:

1. Press the MENU button (■) twice to call up the Page-2 Menu.
2. Press "6". **(6. Set-up Menu)**
3. Press "4". **(4. Message Style)** the following display appears.

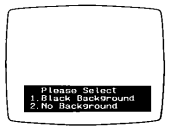




4. Press "1" or "2".
   "1": to select a display with black background
   ("1. Black Background")
   "2": to select a display without black background
   ("2. No Background")
   The selected item turns magenta colour and changes as follows. The on-screen display disappears in about 3 seconds to indicate that the setting has been completed.

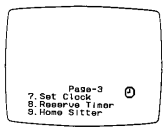


When setting to **"No background"**:



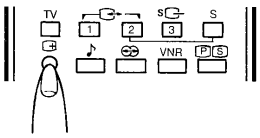
When setting to **"Black Background"**:

7 Set Clock

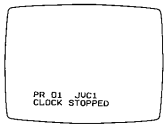


This menu item is for keeping the current time and allowing operation of Reserve **Timer** and **Home Sitter** functions.

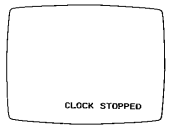
Important:
- The clock employs the 24-hour format. (0:00 – 23:59)
- If power is interrupted for only a couple of minutes, the clock stops, and when power is later restored, the clock is reactivated, but it will be behind the actual time by the interval of interruption.
- If power is interrupted (as in the case of power failure), the clock will stop operating.
  When the power is later restored, the clock shows "0:00". Reset it to make available **Reserve Timer** and **Home Sitter** functions.
- When the clock has stopped, press the Display button ( ) . The following display will appear.



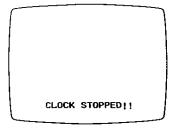
Timer status display:

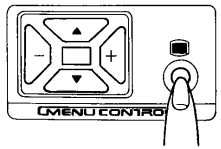


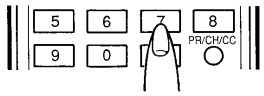
Current clock display:



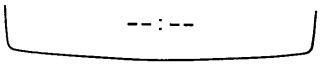
If you try to set the **Reserve Timer** or **Home Sitter** while the clock is stopped, the following display appears for about 3 seconds.





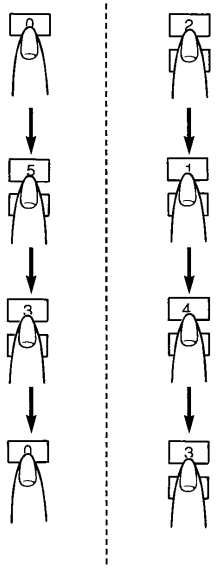


Setting the clock:
1. Press the MENU button ( ) three times to call up the Page-3 Menu.
   (The following operation can be performed while Page-1, Page-2 or Page-3 of the on-screen Menu Pages is displayed.)
2. Press "7". The following display appears.



3. Press the numeric keys corresponding to the current time.
   (Example 1: 5:30, Example 2: 21:43)
   1) Enter the hour from 0 to 23.
      (1) Press "0" and "1', or "2" to set the 10s digit for the hour.
      - "0": On-screen display shows"–:– – "
      - "1": On-screen display shows "1–:– – ".
      - "2": On-screen display shows "2–:– – ".
        * Pressing "3" to "9" at this point will set the hour's units digit ("3:– – " to "9:– – "), not in the hour's 10s digit.

(e.g. 5: 30) (e.g. 21: 43)



In the case of the Example 1:
Press "0". The display changes from "– –:– – " to "–:– – " (Also press "5". It changes from " – –:– – " to "5: – – ".)
* In this case, the hour's units digit to be set in the following (2) can be set.

In the case of the Example 2:
Press "2". The display changes from "– –:– – " to "2 –:– – ".

(2) Press a numeric key to set the units digit for the hour.
- When the 10s digit is "0" or "1":
  Press key corresponding to the current hour from "0" to "9". (In the case of example 1, press "5". The display changes from "– –:– –". to "5:– –")
- When the 10s digit is "2":
  Press key corresponding to the current hour from "0" to "3". (In the case of example 2, press "1". It changes from "2–:– –" to "21:– –".)

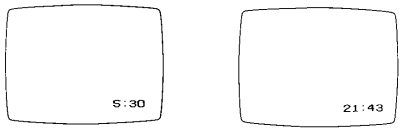
Note:
An invalid input will not be allowed.

2) Enter the minute from 0 to 59.

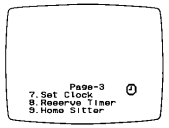
Note:
An invalid number cannot be entered.
(1) Press "0" to "5" to set the 10s digit for the minute.
(In the case of example 1, press "3". It turns "5:3-".)
(In the case of example 2, press "4". It turns "21:4-".)
(2) Press "0" to "9" to set the units digit for the minute.
(In the case of example 1, press "0". It shows "5:30".)
(In the case of example 2, press "3". It shows "21:43".)
* After entering the units digit for the minute, the following display appears to indicate that the time setting has been competed.

The on-screen display disappears in about 3 seconds.
(As long as the clock setting mode is engaged, the display does not disappear.)

Example 1: Example 2:



* To reset the clock, repeat steps 1 to 3.

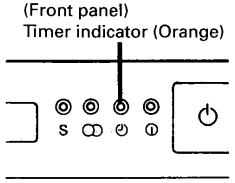


8 Reserve Timer

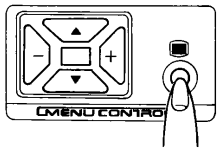
This allows the TV to turn on automatically at a preset time and at a preset Programme Channel.

Important:
- This function operates only once for each setting and must be reset for each use.
- Two different settings are possible (Timer 1 and Timer 2).
- While the Timer function is operating with **"8. Reserve Timer"** of **"9. Home Sitter"**, the Timer indicator (orange) on the front panel remains lit (LED ON); when the indicator goes off (LED OFF), the Timer function is no longer in operation.
- The clock employs the 24-hour system. (0:00 – 23:59)
- If both Timer 1 and Timer 2 are set to operate for the same time, Timer 1 has priority.
- Even if the TV is already on, if the Timer is set to turn on the TV at a specific time, the TV will change to the preset channel when the specified time is reached.

(Front panel)
Timer indicator (Orange)

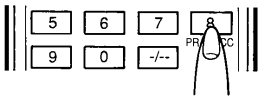


- Programme Channel selection is only possible in the Timer setting mode.
- Once the Reserve Timer turns the TV on automatically, if the TV is not operated in any way, after 60 minutes the TV will turn off automatically. A single adjustment, even audio level adjustment or channel selection, will cancel this switch-off function.
- The Reserve Timer cannot turn the Main Power on; Be sure to keep the Main Power turned on for the Reserve Timer to operate as intended.
  If the Main Power is turned off, the Timer will be engaged in the **"OFF"** mode; times which have already been set remain memorized.

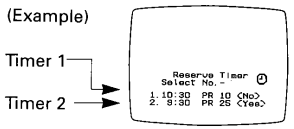


Setting the Reserve Timer:

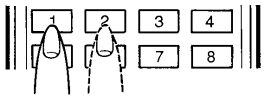
1. Press the MENU button(■) three times to call up the Page-3 Menu.
   (The following operation can be performed while Page-1, Page-2 or Page-3 of the on-screen Menu Pages is displayed.)
2. Press "8". The following display appears.



(Example)

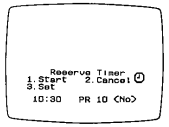


1.: Timer 1
2.: Timer 2
<Yes>: Timer set to on.
<No>: Timer set to off.

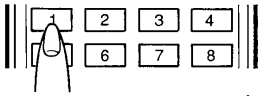


3. Press "1" or "2".
   "1": To make a "Timer 1" setting
   "2": To make a "Timer 2" setting
   The following display appears.

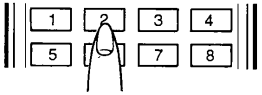
(e.g. 10:30 PR 10 <No>)



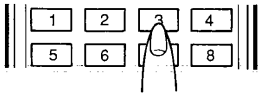
4. Press "1", "2" or "3" to select an operation.
   "1": To select Timer operation according to the settings indicated on the lower portion of the screen
   "2": To turn off the **Reserve Timer** function
   "3": To set the timer when the timer is activated and the channel selection of the station by the timer.



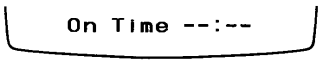
■ To operate the Timer
Press "1". **(1. Start)**
The indication on the lower right of the screen shows **"Yes"**, and the Timer will operate according to the indicated settings.
The on-screen display disappears in about 3 seconds.



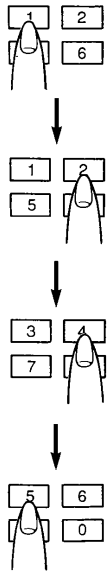
■ Turn off the Reserve Timer function:
Press "2" **(2. Cancel)**
The indication on the lower right of the screen shows **"No"**, and the Timer will not operate.
The on-screen display disappears in about 3 seconds.



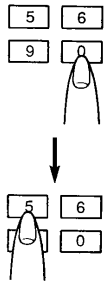
■ To reset Timer switch-on time and/or channel:
1) Press "3". **(3. Set)**
   The following display appears.

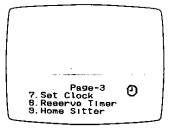


(e.g. 12: 45)



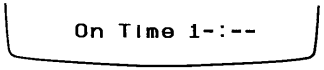
(e.g. PR 05)



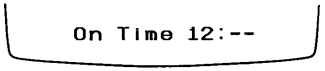


2) Press numeric keys to enter the Timer switch-on.
(Setting procedure for the Timer is the same as for **"7. Set Clock"** Menu operation.)
- For example, if you wish to set for "12:45", proceed in the following order.

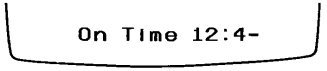
(1) Press "1".



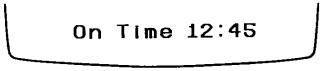
(2) Press "2".



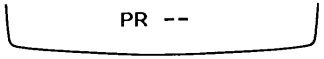
(3) Press "4".



(4) Press "5".

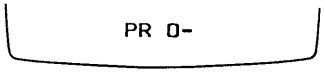


- After setting the Timer switch-on time, the following display appears.

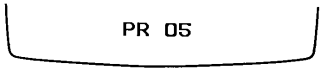


3) Press numeric keys to select the channel.
(Enter any Programme Channel number(s).)
- For example, when you wish to set for "PR 05", proceed in the following order.

(1) Press "0".

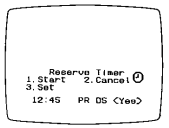


(2) Press "5".



- If you select any channel(s) which have been stored in memory as a guarded channel, it is invalid and cannot be entered. Re-enter a Programme Channel number.

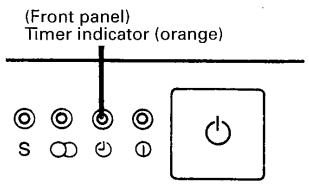
* When the selected channel has been set, the following display appears.
The on-screen display disappears in about 3 seconds to indicate that the setting is completed.



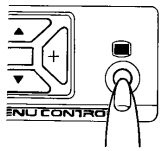
9 Home Sitter

This Timer function allows the TV to automatically turn on and off at preset times day after day without resetting.
Also, any Programme Channel can be preset to be tuned to at the same time the power is turned on automatically.

Important:
- If both this function and the **Reserve Time** function is set to operate at the same time, the **Home Sitter** function has priority. (In this case, the **Reserve Timer** will remain off.)



- If the **Home sitter** is set to turn **ON** and **OFF** at the same time, the function remains OFF.
- While the Timer function is operating with **"8. Reserve Timer"** or **"9. Home Sitter"**, the Timer indicator (orange) on the fron panel remains lit (LED ON); when the indicator goes off (LED OFF), the Timer function is no longer in operation.
- The timer clock setting uses a 24-hour system. (0:00 – 23:59)
- If the power is already on when the Timer on time occurs, the channel switches to the preset selected channel.
- Programme Channel selection is only possible in the Timer setting mode. However, guarded programme channels cannot be selected.
- The Main Power cannot automatically be turned on and off. Be sure to keep the Main Power turned on.
  If the main power is turned off, the Timer will be engaged in the "OFF" mode; times which have already been set remain memorized.



Setting the Home Sitter:

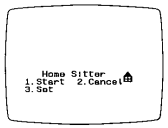
1. Press the MENU button (■) three times to call up the Page-3 Menu. (The following operation can be performed while Page-1, Page-2 or Page-3 of the on-screen Menu Pages is displayed.)
2. Press "9". The following display appears.

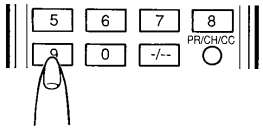
When the **Home Sitter** is set to **On**:

On Timer time/Timer selected channel

Off Timer time

When the **Home Sitter** is set to **Off**:



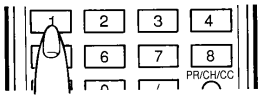


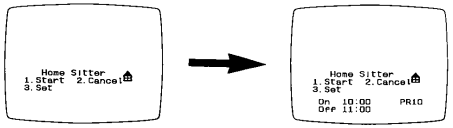
3. Press "1", "2" or "3" to select the item you wish to operate.
   "1": To turn the Timer function on
   "2": To turn the Timer function off
   "3": To reset or change the On Timer time, the channel and/or the Off Timer time.

■ **To turn the Timer function on:**

Press "1" **(1. Start)**.

The setting status display appears. The Timer is now on. The on-screen display disappears in about 3 seconds.

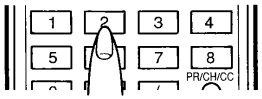


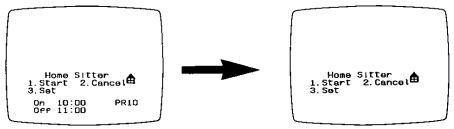


■ **To turn the Timer function off:**

Press "2" **(2. Cancel)**.

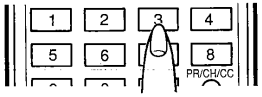
The setting status display disappears. The Timer is now off. The on-screen display disappears in about 3 seconds.

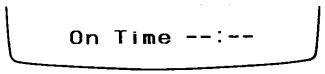




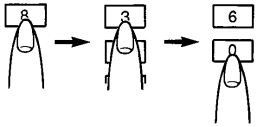
■ **To reset On Timer time, channel and/or the Off Timer time:**

1) Press "3" **(3. Set)**.
   The following display appears.

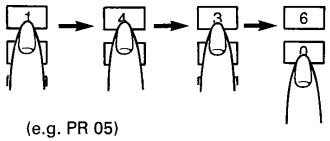




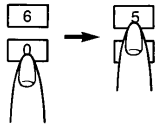
(e.g. On to 8: 30)



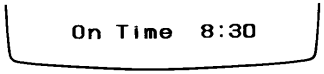
(e.g. Off to 14: 30)



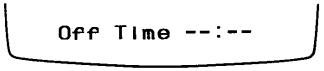
(e.g. PR 05)



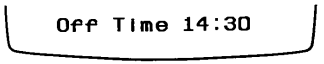
2) Press numeric keys to set the On Timer time.
(The time-setting procedures are the same as for **"7. Set Clock"** Menu setting.)
For example, press "8", "3" and "0" for "8:30".



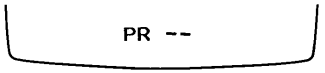
- When the On Timer setting is completed, the following display appears.



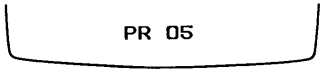
3) Press numeric keys to set the Off Timer time.
(The time-setting procedures are the same as for **"7. Set Clock"** Menu setting.)
For example, press "1", "4", "3" and "0" for "14:30".



- When the Off Timer setting is completed, the following display appears.

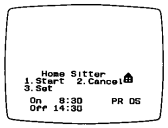


4) Press numeric keys to select the channel.
(Enter Programme Channel numbers.)
- For example, press "0" and "5" for "PR 05".

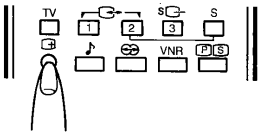


- If a Guarded Channel is selected, it will not be valid. Re-enter a Programme Channel number.

* When Timer channel setting is completed, the following display appears. The on-screen display disappears in about 3 seconds to indicate that the setting is completed. The setting status appears to show what conditions the Timer is set to operate..



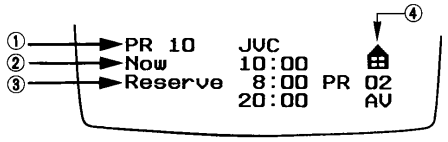
■ Displaying the Overall Status of Timer, Channel, etc.



The present tuned-to channel, the current time, and timer setting can be displayed for quick on-screen checking.

Operation:

1. Press the Display button. ( )
   The on-screen display appears for about 5 seconds.

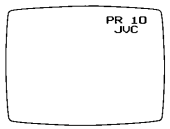


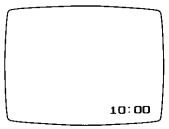
① :The present tuned-to channel (PR10, in this example) and its station ID No. (JVC, in this example)
② The current time (10:00, in this example)
③ The **Reserve Timer** (Reserve time 8:00/20:00 and channel PR 02/AV) settings
④ The **Home Sitter** "On/Off Timer" setting ( )

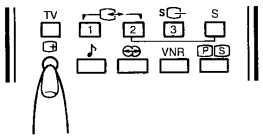
Note:

- For more information regarding the Display button ( ), also refer to the following "Keeping the Channel/Input Mode or Time Indication Displayed".

■ Keeping the Channel/Input Mode or Time Indication Displayed







The channel/input mode (EXT 1, EXT 2 and EXT 3) or time indication can be kept displayed.

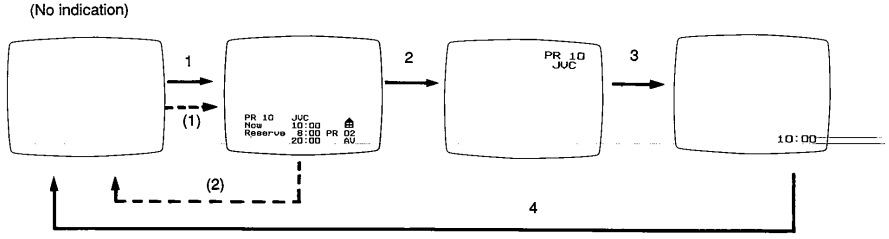
Important:

- These indications cannot be displayed when the **ON-SCREEN** mode's **"OFF"** setting is engaged; the on-screen display can be switched on or off by calling up **"3. On Screen"** from item **"6. Set-Up Menu"** of the Menu Pages. (Refer to page 25.)
- When keeping the time indication displayed, if the **"CLOCK STOPPED"** indication appears instead of the time indication, set the current time following the **"7. Set Clock"** menu. (Refer to page 29, 30.)

Operation:

- Press the Display button ( ) to keep the present channel/input mode or time indication displayed.

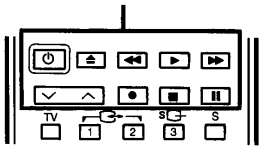
1. Press the Display button ( ).
   The overall status of timer, channel, etc. is displayed.
   (The indications disappear in about 5 seconds.)
2. Press the Display button ( ) again.
   The present channel/input (EXT 1, EXT 2 or EXT 3) mode is kept displayed.
   (The indication is displayed on the upper right part of the screen.)
3. Press the Display button ( ) once more.
   The present time indication is kept displayed. (It is displayed on the lower right part of the screen.)
4. Press the Display button ( ) once more.
   No indication is displayed on the screen.



——► : When the on-screen **"ON"** mode is engaged
---► : When the on-screen **"OFF"** mode is engaged

■ Operating a Video Cassette Recorder Using the Remote Control Unit

Video Cassette Recorder operating section



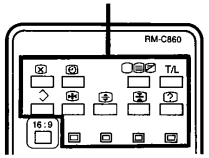
Each button of the Video Cassette Recorder control section of the Remote Control operates the corresponding function on a JVC Video Cassette Recorder.

Important:

- Thoroughly read the instruction manual for your Video Cassette Recorder.
- Some Video Cassette Recorders or some functions of Video Cassette Recorders might not be operable with this Remote Control.

VIEWING A TELETEXT PROGRAMME

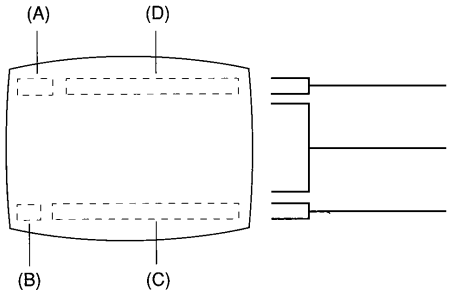
Teletext operating section



Important:

- If you have problem concerning a teletext broadcast, consult your local dealer or television company.
- While watching Teletext programmes, brightness is the only picture adjustment possible, contrast, colour, sharpness are not possible.

● The on-screen display for the Teletext mode



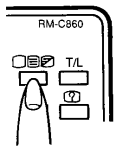
Line 0: Page header

Line 1 to Line 23:
Main page display area
(Each line consists of to 40 characters)

Line 24: Status line

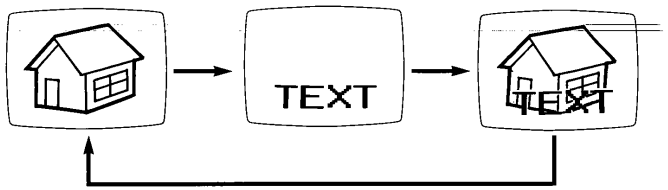
(A): Shows the current Teletext page number.
(B): Shows the current Page access mode ("T" or "L"). (In the TOP (Table Of Page)) broadcast, no indication appears.)
(C): Shows the 4-coloured Page numbers or items.When the data was not entered, the indicator flashes.
(D): The Page header indicates "Magazine (1 digit or character)/Page identification (2 digits)", day, date, time and programme source, etc., in addition to (A). The "Magazine/Page identification (scrolling header)" turns green when Pages are scanned; when the desired page is reached, it returns to white.

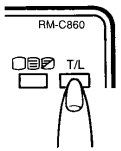
■ Basic Teletext Operation



1. Tune to the TV station that is broadcasting Teletext information.
2. Press the TV/TEXT/MIX button (/ /) to engage the TEXT mode.
   Each pressing of the button changes the mode.
   TV mode ( ) : To view a regular TV programme (the TEXT mode released)
   TEXT mode ( ): To view a Teletext programme
   MIX mode ( ) : To display the selected Teletext Page over a regular TV programme

(TV mode) (TEXT mode) (MIX mode)





3. To change the mode, press the T/L button. Every time it is pressed, the access mode changes. "L" or "T" will be displayed on the lower left side of the screen ((B) area). (However, neither of them will not displayed in the TOP broadcasting.)

LIST mode:

You can select a page which was pre-registered and stored, using colour select button. If you have pages to see constantly, it will be convenient to use this mode.

In the LIST mode, the letter "L" is displayed on the lower left side. (As for the method of registration, see page 40.)

TOP mode:

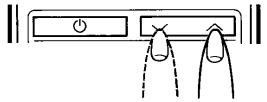
Data (page) is entered automatically. The colour select button enables you to control selection promptly. The TOP mode includes the TOP time when the TOP (Table Of Page) broadcasting is carried out and the NON-TOP time when the WST (World Standard Teletext) or the FLOF (Full Level One Future) is aired.

During the TOP time, nothing will appear on the lower left of the screen. While display of the letter "T" will appear on the lower left of the screen during the NON-TOP time. There are two ways of selection in the TOP time.

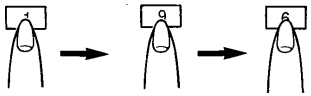
4. Select Teletext page.

Three ways of selecting pages are available as follows;

■ Press the Channel access buttons.



(e.g. Page 196)



Channel access button	In case of the TOP mode		In case of the LIST mode
	TOP time	NON-TOP time	
∧	Changes to the following item in sequence.	For a 1-page higher number	For a 1-page higher number
∨	Changes to the previousitem in sequence.	For a 1-page lower number	For a 1-page lower numbe

■ Press the Numeric keys.

Direct selection is possible by entering 3-digit numbers.

Example: To select Page "196", press "1", "9", then "6".

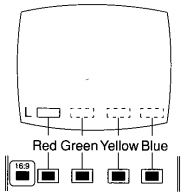
- If the selected page is not being broadcast

  TOP mode (TOP is selected):

  "SEITE xxx WIRD NICHT GESENDET" is displayed, and the page preceding that not being broadcast (xxx) is displayed.

  NON-TOP is set, or LIST mode is selected:

  The selected page number keeps blinking.



■ Press the Colour select buttons.

In the LIST mode:

Four numbers (PAGE) displayed on the lower screen can be selected. The colour select buttons correspond with each one of four numbers. Those numbers can be pre-registered and stored by STORE function.

In the TOP mode:

It takes about a minute to distinguish between TOP and NON-TOP. During this time, "TOP AUFFRISCHUNG, BITTE WARTEN" is displayed on the screen status line, and the numberic keys will not work.

"NON-TOP time"

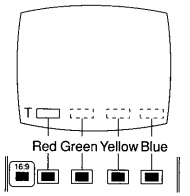
Four numbers (PAGE) displayed on the lower screen can be selected. The colour select buttons correspond with each one of four numbers.

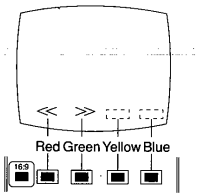
"TOP time"

The colour select mode and the direct select mode can be selecting by the RESET button ( ).

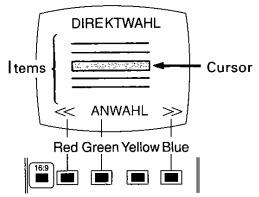
Colour Select Mode:

The mark (<< >>) and the numbers (PAGE) or items displayed on the lower screen can be selected. The colour select buttons correspond with each number or mark, respectively.





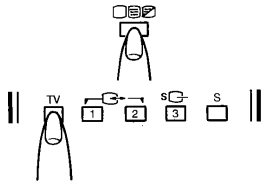
<< (Red)	:	To the previous item
>> (Green)	:	To the following item
Number or item (Yellow or Blue)	:	To the page indicated by the number or item



Direct Select mode:

Select a title on the screen, using the Red(<<) or Blue (>>) colour select buttons. By pressing the Green (ANWAHL), contents of the items where the cursor is located can be seen. (Even if the Yellow button is pressed at this moment, no action will take place.)

<< (Red)	: Cursor moves from the bottom to the top.
>> (Blue)	: Cursor moves from the top to the bottom.
ANWAHL (Green)	: Contents of the items where the cursor is located can be seen.



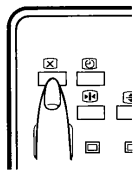
To release the TEXT mode:

Press either the TV/TEXT/MIX (▢ / ▤ / ▨) or input mode select button.

- Press the TV/TEXT/MIX button (▢ / ▤ / ▨) to select the TV mode.
- Press the input mode select button to select the input mode (TV, EXT 1, EXT 2 or EXT 3).

■ Special Operating Options

Canceling the Teletext Display temporarily (CANCEL button (⊠))

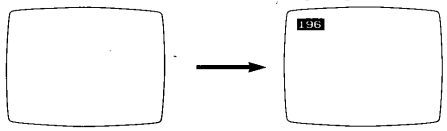


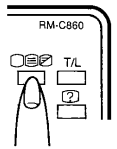
When selecting a Page that takes a long time to be reached, this allows the regular TV programme to be viewed until the Page is reached.

Operation:

1. Select a Teletext Page. (Example: Page 196)
2. Press the CANCEL button (⊠).
3. The selected Page number appears on the upper left of the screen to indicate that the Page has been reached. (A standby condition is engaged.)

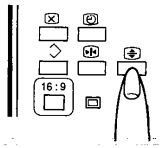
(e.g. Page 196)





4. Press the TV/TEXT/MIX button (▢ / ▤ / ▨) to display the selected Teletext Page on the screen.

Enlarging a Teletext Display (SIZE button (⇕))

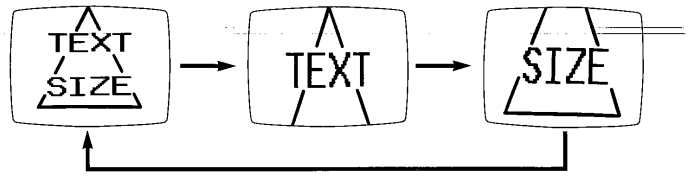


This allows the size of either the upper half or lower half of the Teletext display to be vertically doubled.

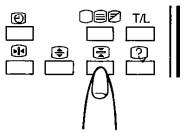
Operation:

Press the SIZE button (⇕) Each pressing of the button changes the display as follows:

(Example)



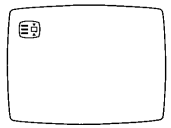
Stopping Scrolling of the Teletext Display Temporarily (HOLD button ( ))



This allows Page scrolling to be stopped temporarily, even as the transmitted Teletext page continues scrolling. This is convenient when you wish to make a note of the information, etc.

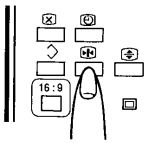
Operation:

1. Press the HOLD button ( ) when the page you wish to " (hold)" appears on the screen. The " " indication on the upper left of the screen appears.



2. Press HOLD button ( ) again to release the HOLD mode.
   Selecting another Teletext Page or pressing the RESET button ( ) also releases this mode.

Initializing the Teletext Page to its Start Page (RESET button ( ))



Returning to the 1st Page is simple.

Operation:

- Press the RESET button ( ).

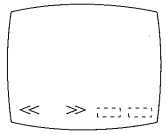
In the LIST mode:

Becomes the registered page that located left side of the lower screen (Red).

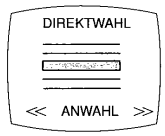
At the time of TOP:

Every time the RESET button( ) is pressed, the mode shifts to the colour select mode and direct select mode.

Colour select mode



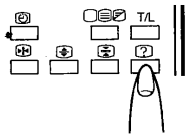
Direct select mode



At the time of NON-TOP:

Becomes Teletext page on page 100.

Revealing Information Hidden on Certain Teletext Pages (REVEAL button ( ))

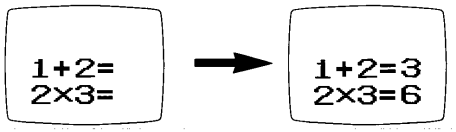


Some Teletext Pages contain hidden "questions" and "answers"; these "answers" can be made to appear on the screen.

Operation:

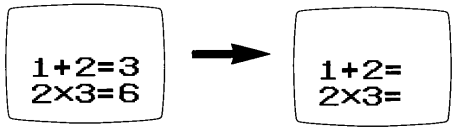
1. Press the REVEAL button ( ) to make hidden information appear on the screen.

(Example)



2. Press REVEAL button ( ) again to make the information disappear again.

(Example)



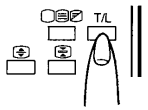
Storing the Pages in Memory (STORE button (◇))

If you often view certain Teletext Pages, storing them in memory enables quick call up.

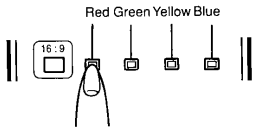
Important:
- Up to four different Teletext Pages can be stored for each of the Programme Channels "PR 01" to "PR 15".
- The remaining Programme Channels, "PR16" to "PR99" and "PR00 (AV)", all share a common memory. Therefore, any user-selected pages will be the same for any of these Programme Channels.
- Storing Programme Channels and calling up the channels stored in memory are possible only in the LIST mode.
- When calling up a Page stored in memory, press the Colour select buttons corresponding to that Page number colour.

Operation:

1. Tune to a Programme Channel you wish to store in memory.

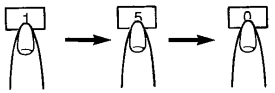


2. Press the T/L button to engage the LIST mode.

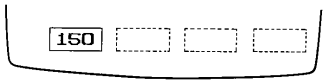


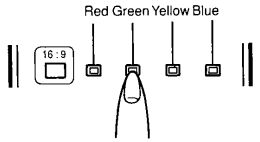
3. Press one of the Colour select buttons.

(e.g. 150)



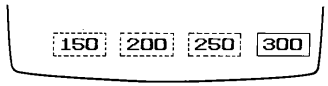
4. Enter a 3-digit Page number in the position selected in Step 3. (e.g. 1 → 5 →0)

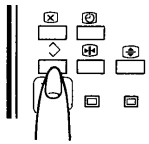




5. Repeat steps 3 and 4 to enter each of the remaining Page numbers.

(e.g. 150, 200, 250, 300)





6. Press the STORE button (◇).
The group of four Page numbers appearing on the bottom of the screen turn white to indicate that they have been stored in memory. Press STORE button (◇) again to restore these pages to their original colour.

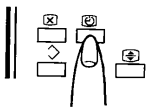
Displaying a Still Picture for a Sub-Teletext Page (TIME PAGE button ( ))

Some Teletext Pages have subpages, which scroll automatically. Any subpage you wish to view can be stored in memory and displayed.

Important:
- Subpages may be accessed only for Teletext Pages which have them.
- Subpages generally indicate their position within their sequence. (Example: "3/6" normally indicates the 3rd subpage in a set of 6.)

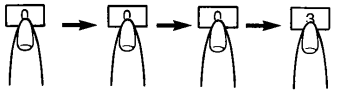
Operation

1. Select a Teletext Page that has subpages.
   (Example: Page 177)
2. Press the TIME PAGE button ( ).
   The "****" indication appears on the upper left of the screen.



3. Enter the number of the subpage you wish to view.
   (Example: If selecting the 3rd subpage, press "0", "0", "0" and "3".)

(e.g. 0003)



- This will be displayed on the upper left of the screen. When the final digit is keyed in, the page number on the bottom of the screen will change to "177+". However, when the subject categories are displayed on the bottom of the screen, the "+" indication does not appear.

4. Subpages will be displayed in order. When the subpage selected in step 3 appears on the screen, scrolling stops.

ENGLISH

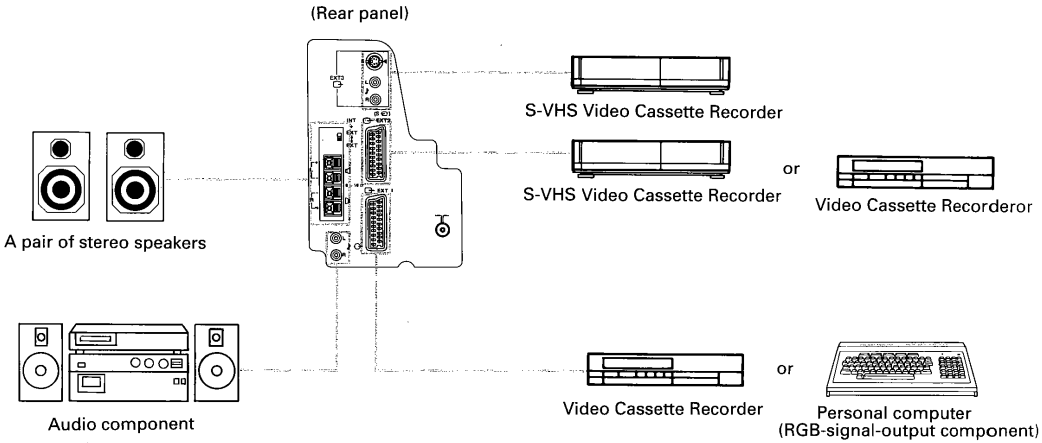
AV (Audio Visual) components such as a Video Cassette Recorder and external audio speakers can be connected to this TV.

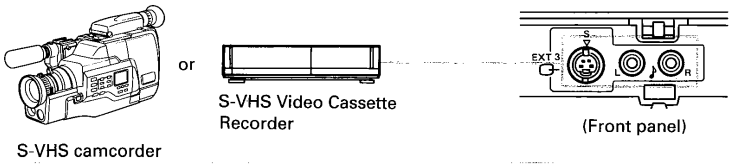
- Video Cassette Recorder (or camcorder)
- Personal computer (RGB-signal-output component)
- Audio component (stereo amplifier)
- External speakers (stereo speakers)

Important:

- Refer to the appropriate section of the instruction manual when connecting components.
- Each illustration shows an example for connecting a specific component connected to this TV.
- If you operate a video or audio component placed near the TV set, picture and/or sound may become noisy because of interference between components. If this occurs, move the components apart until the interference is eliminated, or turn off the components that are not being used.
- When viewing pictures from a connected component, switch the input mode, depending on connected input connector. Refer to "Switching the Input Mode (TV, EXT 1, EXT 2 and EXT 3)" on page 14.

■ **Connecting component examples:**



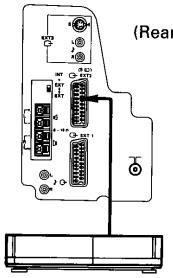


■ Connecting a Video Cassette Recorder (or Camcorder)

To view playback pictures of a Video Cassette Recorder or camcorder, connect the unit to this TV set. The two EXT 3 connectors, having a specific function, facilitate dubbing or editing between two Video Cassette Recorders.

Important:

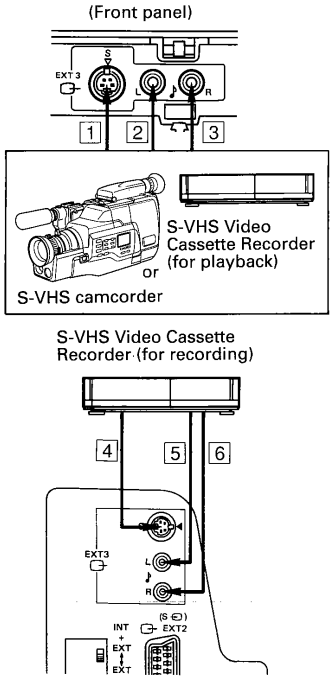
- The two sets of EXT 3 connectors, located on both the front and rear panels, are internally linked to each other (directly connected). The signals input from one set of connectors are directly output from the other connectors, therefore, input signals cannot be applied to both rear and front connectors simultaneously; disconnect one set, or use either set of connectors as output connectors (for recording).
- S-VIDEO signals are separated into luminance (Y) signals and chrominance (C) signals, preventing from interference between them; therefore, vivid, more defined pictures can be obtained.
  The S-VIDEO signals are used from an S-VHS Video Cassette Recorder and S-VHS camcorder.



- **When Connecting to an S-VIDEO Component**
  Connect the EXT 2 or EXT 3 connectors.

EXT 2 connectors

Connect the 21-pin Euroconnector (SCART), capable of S-VIDEO (Y/C) output, of the video component to the EXT 2 connector of the TV set.



EXT 3 connectors

1 Connect the S-VIDEO output connector of the video component to the front panel S-VIDEO connector (4-pin) of the TV set.

2 Connect the L channel of the audio output connectors of the video component to the front panel L-channel connector of the TV set.

3 Connect the R channel of the audio output connectors of the video component to the front panel R-channel connector of the TV set.

* When editing or dubbing, make the following connections, in addition, to those above.

4 Connect the S-VIDEO input connector of the video component to the rear panel S-VIDEO connector (4-pin) of the TV set.

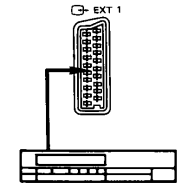
5 Connect the L channel of the audio input connectors of the video component to the rear panel L-channel connector of the TV set.

6 Perform the same connection as above of the R-channel connectors of the video component to the TV set.

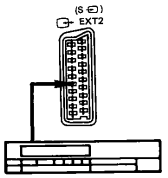
Note:

- The front and rear connectors of the TV set can be used as shown in the following table:

EXT 3 connectors	Using one set		Using both sets	
Front panel connectors	Input	—	Input	Output
Rear panel connectors	—	Input	Output	Input



Video Cassette Recorder



Video Cassette Recorder

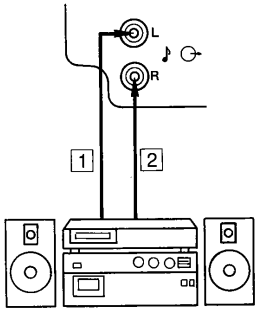
- **When Connecting a Component not equipped with S-VHS**
  Connect to EXT 1 orEXT 2.

EXT 1 connector
Connect the video component's 21-pin Euroconnector (SCART), which is capable of Audio/Video output, to the EXT 1 connector of the TV set.

EXT 2 connector
Connect the video component's 21-pin Euroconnector (SCART), which is capable of Audio/Video output, to the EXT 2 connector of the TV set.

■ Connecting an Audio Component (Stereo Component)

When listening to the TV sound via a Hi-Fi audio component system, make the following connection.



Audio output connectors (variable output)

1 Connect the L-channel AUX (Auxiliary) input connector of an audio component (stereo amplifier) to the L-channel audio output connector of the TV set.

2 Connect the R-channel AUX input connector of an audio component to the R-channel audio output connector of the TV set.

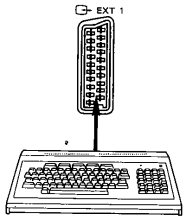
Note:

- These are variable output connectors; the output level also varies according to the TV volume level.

■ **Output function of each connector**
In addition to the Audio output connector, both the EXT 1 and EXT 2 connectors also have output functions. The relation between input select mode and the output of each connector is as follows:

Input select mode	Output		
	EXT 1 connector	EXT 2 connector	Audio output connector
TV	TV	TV	TV
EXT 1	TV	EXT 1	EXT 1
EXT 2	TV	—	EXT 2
EXT 2 (S2)	TV	—	EXT 2
EXT 3 (S3)	TV	—	EXT 3

■ Connecting an RGB-signal-output Component (Personal Computer, etc.)



When monitoring (signals from) an RGB-signal-output component, such as a personal computer, etc., perform this connection.

Important:

- All RGB-signal-output components cannot be connected to this TV; refer to page 50 for specifications of available 21-pin Euroconnector (EXT 1).
- Please use an RGB-signal-output component which has superimpose and external sysnchronization facilities. If these ara unavailable, then the picture will be distorted when the TV mode is engaged.
- RGB signals cannot be input to the EXT 2 connector.

Connect the 21-pin Euroconnector (SCART) of the RGB-signal-output component, such as a personal computer, to the EXT 1 connector of the TV.

- Available functions when an RGB-signal-output component is connected to the EXT 1 connectors are as follows:

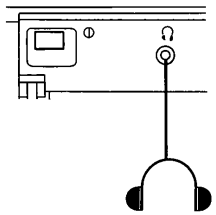
RGB-signal-output component to be connected	Input select mode of the TV	Ys signal**	Displaying picture	TV sync	Speaker output of the TV
External sync possible (or External sync mode)	TV	Ys pulse	Superimposed pictures*	TV picture sync	TV sound
		Ys: H	Picture of RGB-signal-output component		
		Ys: L	TV picture		
	EXT 1	Ys pulse	Picture of RGB-signal-output component	Sync of RGB-signal-output component	Sound of EXT 1 input
		Ys: H			
		Ys: L	No picture (no brightness)		
External sync impossible (or External non-sync mode)	EXT 1	Ys: H	Picture of RGB-signal-output component	Sync of RGB-signal-output component	Sound of EXT 1 input

Notes:

* Superimposition : This means a function which superimposes RGB picture over the TV picture.

** Ys signal : Rapid Switching Signal, which is output with RGB signals and is necessary to perform superimposition, picture reproduction of RGB-signal-output component and TV picture reproduction.

- Adjustments for RGB input signals:
  Colour : possible
  Bright : possible
  Cont. : possible
  Sharp : not possible (The level indication is movable. With a superimposed picture, the sharpness of the TV picture can be adjusted.)



■ Connecting Headphones

Connect headphones when you wish to listen to the TV sound via headphones.

Headphone jack
- Connect headphones having a stereo mini plug (ø3.5 mm) to this jack.

Note:
- When headphones are connected, audio output from built-in speakers and the speakers connected to the external speaker terminals is switched off automatically.

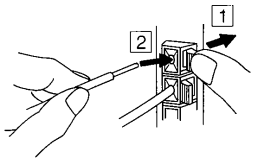
■ Connecting External Speakers

Connect external speakers when listening to sound via external speakers or enjoying sound with surround sound effect.

Important:
- Connect the red or positive (+) speaker wire to the red terminal and the black or negative (-) wire to the black terminal.
- Connect the right-channel speaker to the "R"-marked terminal.
  Connect the left-channel speaker to the "L"-marked terminal.
- Use a speaker with impedance within 8 to 16 ohms.
- Set the Speaker select switch the desired position.

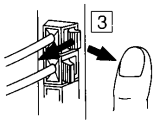
"EXT" position:	Sound will be heard from the external speakers connected to the TV. (No sound will be heard from the built-in speakers.)
"INT + EXT" position:	Sound will be heard from both the built-in and external speakers.

External speaker terminals

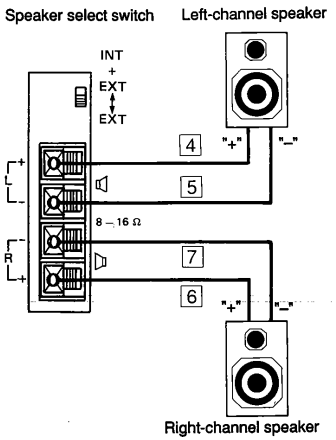


1 Press the protruding portion on the side of the terminal to open the terminal.

2 Insert the tip of the speaker wire into the terminal.



3 Release the protruding portion.



4 Connect "+" pole of the left-channel speaker to the "+" pole of the "L"-marked external speaker terminal.

5 Connect "–" pole of the left-channel speaker to the "–" pole of the "L"-marked external speaker terminal.

6 Connect "+" pole of the right-channel speaker to the "+" pole of the "R"-marked external speaker terminal.

7 Connect "–" pole of the right-channel speaker to the "–" pole of the "R"-marked external speaker terminal.

- If the power cord plug is disconnected from the AC outlet, or the TV aerial is causing problems, the user often regards these as trouble with the TV itself; be sure to check the following items before calling for service.

Important:
- Review all the instructions written in this booklet.

Problems	Causes	Measures
No power supply	Is the power cord plug disconnected?	Insert the plug in an AC outlet.
	Is the Main Power switched off?	Press the Main Power button?
No picture or no sound	Is the aerial disconnected?	Check the aerial connections.
	Are headphones plugged in?	Disconnect the headphones.
	Is the speaker switch set to "EXT"?	Set the speaker switch to "INT + EXT".
	Is the input mode (TV, EXT 1, EXT 2 and EXT 3) set to an incorrect position?	Press the input mode select button to engage the correct mode.
Wrong colours	Are the COLOUR and BRIGHT controls adjusted incorrectly?	Adjust the COLOUR and BRIGHT controls.
The picture is black and white	Has it been received in the SECAM mode, in spite of the PAL broadcasting?	Reset to P/S AUTO, using PAL/SECAM button(Ⓟ Ⓢ).
Inoperable remote Control	Are batteries exhausted?	Replace the batteries.
	Are the batteries' +/– poles placed correctly?	Re-install the batteries correctly.
Lines or streaks in picture (interference)	Could there be interference with a personal computer, TV, Video Cassette Recorder, audio component, etc. or jamming by a radio station, etc.?	Move the components apart until the interference is eliminated.
		Move aerial to a different position or turn it to a different direction.
Spotted picture (crosstalk)	Could there be interference from a hair dryer, electric cleaner, neon sign, high-tension wire, automobile, motorcycle, etc.?	Move aerial away from the source of interference.
		Replace aerial cable with a coaxial cable, which is less prone to interference.
Double pictures (ghost)	Could the direct signals from a TV broadcast station be affected by reflected signals from mountains or buildings, etc.?	Move aerial to a different position, height or direction.
		Replace with an aerial having good directivity.
Snowy picture (image noise)	Is the external aerial cut or disconnected?	Check the aerial connection.
	Is aerial turned in the wrong direction due to strong wind, etc.?	Direct aerial correctly.
	Is the aerial damaged?	Replace or repair the aerial.
No receivable Teletext programme	Is the TV tuned to a Teletext channel?	Tune to a channel that broadcasts teletext information.
No sound with stereo broadcast	Is the Sound mode selection set to "Mono" mode?	Press the sound multiplex button (◯◯I/II) to set the Sound mode to "Stereo".

Problems	Causes	Measures
No sound for Bilingual I or Bilingual II with dual sound broadcast reception	Is the Sound mode selection set to the other mode?	Press the sound multiplex button (◑◯I/II) to set the Sound mode to either "Bilingual I" or "Bilingual II".

The following are not caused by TV malfunctions:

- When you touch the CRT surface, you might feel a slight charge of static electricity. This is because the CRT contains static electricity; it does not affect the human body.
- Due to alteration of ambient temperature, a crackling sound might be heard from the TV set; there is no problem unless the picture or sound is abnormal.
- When a still bright image (of a white dress, for example) appears on the screen, the image might be coloured. This problem occurs in all CRTs, and as bright images disappear, such colouration also disappears.

SPECIFICATIONS

ENGLISH

Type : Colour Television
TV RF system : CCIR B/G
Colour system : PAL, SECAM
Stereo system : West Germany system
Teletext system : TOP
Number of programme channels : 00 (AV), 01-99
Receiving channels and frequency:

	Channel	Frequency
VHF	V_L: E2-E4, A-C	47 MHz - 88 MHz
	V_H: E5-E12, D-H	174 MHz - 230 MHz
UHF	U: E21 - E69	470 MHz - 862 MHz
CATV	MID: X - Z + 2	68 MHz - 103 MHz
	S1 - S20 (7 MHz) S21 - S41 (8 MHz)	104 MHz - 470 MHz

Intermediate frequency : V.IF; 38.9 MHz
S.IF; 33.4 MHZ
Colour sub-carrier : PAL (4.43 MHz)
SECAM (4.40625/4.25 MHz)
Aerial input impedance : 75 ohms, unbalanced
Power input : AC 220 - 240 V, 50 Hz
Power consumption : 110 W (AV-21F1EG)
120 W (AV-25F1EG)
130 W (AV-28F1EG)
Picture tube : FST (Flat-Square Tube)

Tube size	Visible size	Model
55 cm	51 cm	AV-21F1EG
63 cm	59 cm	AV-25F1EG
70 cm	66 cm	AV-28F1EG

*diagonally measured

Audio output : Peak Music power
30W + 30W (Speaker select switch set to "INT + EXT", when 8-ohm external speakers connected.)
20W + 20W (Speaker select switch set to "INT + EXT".)
Music power
15W + 15W (Speaker select switch set to "INT + EXT", when 8-ohm external speakers connected.)
10W + 10W (Speaker select switch set to "INT + EXT".)

Speaker : 10 cm round × 2, 3 cm round × 2
External input/output : EXT 1: 21-pin Euroconnector (SCART)
EXT 2: 21-pin Euroconnector (SCART)
• Accepts Y/C separated signals.
EXT 3: Y/C separate video input connector
Audio input connector (RCA)
• Directly connection (front/rear)
Variable audio output connectors (RCA):
More than 0 - 2 Vrms, low impedance
(1 kHz when modulated 80%)
External speaker terminals:
Impedance 8 - 16 ohms
Dimensions (W × H × D) : 505 × 471 × 495 mm (AV-21F1EG)
575 × 512 × 448 mm (AV-25F1EG)
636 × 556 × 479 mm (AV-28F1EG)

Weight : 24.3 kg (AV-21F1EG)
29.7 kg (AV-25F1EG)
36.2 kg (AV-28F1EG)

Accessories : Remote Control Unit (RM-C860) × 1
"AA (R6)"-size dry battery × 2

Design and specifications subject to without notice.

■ 21-pin Euroconnector (SCART socket)

Pin No.	Signal Designation	Matching Value	EXT 1	EXT 2
1	Audio Output (R)	0.5 Vrms , ≤ 1 kohm	○	○
2	Audio Input (R)	0.5 Vrms , ≥ 10 kohm	○	○
3	Audio Output (L)	0.5 Vrms , ≤ 1 kohm	○	○
4	Audio Common Return (GND)		○	○
5	Blue Return (GND)		○	—
6	Audio Input (L)	0.5 Vrms , ≥ 10 kohm	○	○
7	Blue Input	0.7 Vp-p , 75 ohm	○	NC
8	Function Switching (SLOW SW)	Low: 0 – 2 V High: 9.5 – 12 V , ≥ 10 kohm	○	NC
9	Green Return (GND)		○	—
10	No Connection		NC	NC
11	Green Input	0.7 Vp-p , 75 ohm	○	NC
12	No Connection		NC	NC
13	Red Return (GND)		○	—
14	No Connection		NC	—
15	Red Input	0.7 Vp-p, 75 ohm	○	—
	Chrominance Input (S-Video)	Same as component of 1 Vp-p CVBS , 75 ohm	—	○
16	Blanking (Rapid Switching; Ys)	Low: 0 – 0.4 V High: 1 – 3 V , 75 ohm	○	NC
17	CVBS Return (GND)		○	○
18	Blanking Return (GND)		○	○
19	CVBS Output	1 Vp-p , 75 ohm	○	○
20	CVBS Input/Y input (S-Video)	1 Vp-p , 75 ohm	○	○
21	Common Return (GND)		○	○

■ S-video input connector (EXT 3)

Connector	Pin No.	Signal	Matching Value
S (Y/C)-Connector (4-Pin)	1	Y Return (GND)	
	2	C Return (GND)	
	3	Y Input	1 Vp-p , 75 ohm
	4	C Input	Same as C component of 1 Vp-p CVBS , 75 ohm
RCA-jack (L)	—	Audio L Input	0.5 Vrms , ≥ 10 kohm
RCA-jack (R)	—	Audio R Input	0.5 Vrms , ≥ 10 kohm

■ TV/Cable Channel Frequency Comparison Table

BAND	CH NO.	DISPLAY	f_P[MHz]	f_L[MHz]
VL	E2	CH 02	48.25	87.15
	E3	CH 03	55.25	94.15
	E4	CH 04	62.25	101.15
VH	E5	CH 05	175.25	214.15
	E6	CH 06	182.25	221.15
	E7	CH 07	189.25	228.15
	E8	CH 08	196.25	235.15
	E9	CH 09	203.25	242.15
	E10	CH 10	210.25	249.15
	E11	CH 11	217.25	256.15
	E12	CH 12	224.25	263.15
VL	ITALY A	CH 13	53.75	92.65
	ITALY B	CH 14	62.25	101.15
	ITALY C	CH 15	82.25	121.15
VH	ITALY D	CH 16	175.25	214.15
	ITALY E	CH 17	183.75	222.65
	ITALY F	CH 18	192.25	231.15
	ITALY G	CH 19	201.25	240.15
	ITALY H	CH 20	210.25	249.15
U	E21	CH 21	471.25	510.15
	E22	CH 22	479.25	518.15
	E23	CH 23	487.25	526.15
	E24	CH 24	495.25	534.15
	E25	CH 25	503.25	542.15
	E26	CH 26	511.25	550.15
	E27	CH 27	519.25	558.15
	E28	CH 28	527.25	566.15
	E29	CH 29	535.25	574.15
	E30	CH 30	543.25	582.15
	E31	Ch 31	551.25	590.15
	E32	CH 32	559.25	598.15
	E33	CH 33	567.25	606.15
	E34	CH 34	575.25	614.15
	E35	CH 35	583.25	622.15
	E36	CH 36	591.25	630.15
	E37	CH 37	599.25	638.15
	E38	CH 38	607.25	646.15
	E39	CH 39	615.25	654.15
	E40	CH 40	623.25	662.15
	E41	CH 41	631.25	670.15
	E42	CH 42	639.25	678.15
	E43	CH 43	647.25	686.15
	E44	CH 44	655.25	694.15
	E45	CH 45	663.25	702.15
	E46	CH 46	671.25	710.15
	E47	CH 47	679.25	718.15
	E48	CH 48	687.25	726.15
	E49	CH 49	695.25	734.15
	E50	CH 50	703.25	742.15
	E51	CH 51	711.25	750.15
	E52	CH 52	719.25	758:15
	E53	CH 53	727.25	766.15
	E54	CH 54	735.25	774.15
	E55	CH 55	743.25	782.15
	E56	CH 56	751.25	790.15
	E57	CH 57	759.25	798.15
	E58	CH 58	767.25	806.15
	E59	CH 59	775.25	814.15
	E60	CH 60	783.25	822.15

BAND	CH NO.	DISPLAY	f_P[MHz]	f_L[MHz]
U	E61	CH 61	791.25	830.15
	E62	CH 62	799.25	838.15
	E63	CH 63	807.25	846.15
	E64	CH 64	815.25	854.15
	E65	CH 65	823.25	862.15
	E66	CH 66	831.25	870.15
	E67	CH 67	839.25	878.15
	E68	CH 68	847.25	886.15
	E69	CH 69	855.25	894.15
VH	CATV1 (S1)	CC 01	105.25	144.15
	CATV2 (S2)	CC 02	112.25	151.15
	CATV3 (S3)	CC 03	119.25	158.15
	CATV4 (S4)	CC 04	126.25	165.15
	CATV5 (S5)	CC 05	133.25	172.15
	CATV6 (S6)	CC 06	140.25	179.15
	CATV7 (S7)	CC 07	147.25	186.15
	CATV8 (S8)	CC 08	154.25	193.15
	CATV9 (S9)	CC 09	161.25	200.15
	CATV10 (S10)	CC 10	168.25	207.15
VS	CATV11 (S11)	CC 11	231.25	270.15
	CATV12 (S12)	CC 12	238.25	277.15
	CATV13 (S13)	CC 13	245.25	284.15
	CATV14 (S14)	CC 14	252.25	291.15
	CATV15 (S15)	CC 15	259.25	298.15
	CATV16 (S16)	CC 16	266.25	305.15
	CATV17 (S17)	CC 17	273.25	312.15
	CATV18 (S18)	CC 18	280.25	319.15
	CATV19 (S19)	CC 19	287.25	326.15
	CATV20 (S20)	CC 20	294.25	333.15
	CATV21 (S21)	CC 21	303.25	342.15
	CATV22 (S22)	CC 22	311.25	350.15
	CATV23 (S23)	CC 23	319.25	358.15
	CATV24 (S24)	CC 24	327.25	366.15
	CATV25 (S25)	CC 25	335.25	374.15
	CATV26 (S26)	CC 26	343.25	382.15
	CATV27 (S27)	CC 27	351.25	390.15
	CATV28 (S28)	CC 28	359.25	398.15
	CATV29 (S29)	CC 29	367.25	406.15
	CATV30 (S30)	CC 30	375.25	414.15
	CATV31 (S31)	CC 31	383.25	422.15
	CATV32 (S32)	CC 32	391.25	430.15
	CATV33 (S33)	CC 33	399.25	438.15
	CATV34 (S34)	CC 34	407.25	446.15
	CATV35 (S35)	CC 35	415.25	454.15
	CATV36 (S36)	CC 36	423.25	462.15
	CATV37 (S37)	CC 37	431.25	470.15
	CATV38 (S38)	CC 38	439.25	478.15
	CATV39 (S39)	CC 39	447.25	486.15
	CATV40 (S40)	CC 40	455.25	494.15
	CATV41 (S41)	CC 41	463.25	502.15
VL	X	CC 75	69.25	108.15
	Y	CC 76	76.25	115.15
	Z	CC 77	83.25	122.15
	Z+1	CC 78	90.25	129.15
	Z+2	CC 79	97.25	136.15

f_P: Picture frequency
f_L: Local frequency

PRECAUTIONS DE SECURITE

DANGER:
POUR EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER CET APPAREIL A LA PLUIE OU A L'HUMIDITE

ATTENTION:
POUR DES RAISONS DE SECURITE, BIEN RESPECTER LES REGLES SUIVANTES PENDANT L'UTILISATION DE CET APPAREIL:

- N'utiliser que la source d'alimentation électrique spécifiée (220-240 V ca, 50 Hz).
- N'utiliser que des câbles et des prises en bon état
- Eviter toute installation non conseillée et ne jamais placer l'appareil en un endroit ou l'aération n'est pas suffisante.
- Ne jamais laisser pénétrer d'objects ou de liquides par les ouvertures de l'appareil.
- En cas de panne, débrancher la prise d'alimentation électrique et faire appel à un technicien. Ne jamais tenter de réparer l'appareil soi-même ni d'ouvrir le couvercle arrière.
- Si le téléviseur n'est pas utilisé pendant une relativement longue période de temps, le débrancher du secteur.

Vous venez de vous porter acquéreur d'un téléviseur couleur JVC et nous en remercions. Avant toute chose, lisez les instructions de ce mode d'emploi pour vous familiariser avec l'utilisation du téléviseur.

Les illustrations dans ce mode d'emploi correspondent au modèle AV-25F1EG.